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Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

UNIVERSITY COLLEGE HOSPITAL.

I. STRICTURE: SYME'S OPERATION: ALARMING SYMPTOMS FOLLOWING THE USE OF AMYLENE.

Under the care of J. E. ERICHSEN, Esq.

J. J., a middle-aged man, was admitted, under Mr. Erichsen's care, on account of stricture of the urethra, for which he had long been a patient at this Hospital. Every possible means had been adopted for the relief of this condition, but all had failed; as, though Mr. Erichsen was usually able to pass a catheter and dilate the stricture to the size of No. 5 or No. 7, the instrument never would pass with sufficient ease to enable the patient himself to use it, and the urethra soon contracted again to its old dimensions. The patient, who is an exceedingly intelligent fellow, was anxious to have an operation performed four years ago, in consequence of seeing another man in the Hospital on whom this treatment had been successfully adopted; and accordingly Mr. Erichsen at that time performed Syme's operation. It was not possible, however, after the operation, though the wound healed kindly, and all other things went on well, to pass a catheter larger than No. 7, and no permanent benefit resulted from it. On this and on two other occasions the patient inhaled chloroform, but suffered so much from the vomiting induced by the anæsthetic that he had a great horror of it; and, on the present occasion, as the stricture was as obstinate as ever, and the only prospect of benefit seemed to be from its division, he was inclined to submit to this operation without any anæsthetic. As it was believed, however, that amylene would be less likely to induce vomiting or other serious symptoms, he was persuaded to inhale this drug. Accordingly, on March 18th, amylene was given in an inhaler, and Syme's operation was performed in the usual manner, with the sole modification that Mr. Marshall's staff was used instead of the ordinary Syme's staff.

The operation did not offer anything to call for special observation. It was accomplished without difficulty. The patient, however, seemed to resist the action of the amylene, and it is noted that it was half-an-hour before he became insensible. There was considerable congestion and much struggling, and he affirms that though in a condition resembling intoxication, he felt and can remember the whole operation, and has since recognised some persons present whom he had not seen before. When seen an hour afterwards, he was quite comfortable and free from pain; his pulse of its usual strength. At 8 P.M., however, having been quite comfortable a few minutes before, he was seized with severe rigors and nausea, which soon terminated in vomiting. He was violently convulsed, paid hardly any attention to things around him, and was in a state of the greatest distress. Calomel was given, as it had controlled the vomiting after chloroform; but it now failed to check the vomiting, which continued at very short intervals during the night, accompanied by intense thirst, so that he drank between thirty and forty tumblers of cold water. During March 19th, the vomiting continued, but not so frequently. He complained of intense headache, and passed only a very small quantity of water during the day. He was ordered a grain of opium every four hours, and stimulants both by the mouth and in enemata. The vomiting, however, persisted, and next morning (March 20th, 4 A.M.) he was in a very alarming condition. Only a few solitary beats of the pulse could be felt occasionally. The lips were livid, the skin clammy, the extremities cold. As the stimulants would not remain on the stomach, frequent injections of brandy and water were given, and appeared to be of service, as in a few hours he was somewhat relieved of the pain in his head, the pulse in the carotids was perceptible though weak, and the skin warmer. The vomiting, however, persisted. As he was getting under the influence of opium (as evidenced by the pupils), this drug was omitted, and an effervescing saline draught ordered with a view of checking the vomiting. This, however, failed, and was therefore discontinued. He had passed no water since the last note. Blisters were applied to the loins. In the afternoon, he was put into a hot bath (at 105°) for eight minutes. This did not increase the faintness. It is noted that the odour of the amylene still remained about him. In the evening a quart of warm water was injected into the rectum. He was now evidently recovering. The radial pulse could be clearly counted 112, and he was not so livid. Next morning, he had passed a small quantity of water, after suppression of urine of fifty-four hours duration, the urine passed being very albuminous. Before the operation, it had been found healthy. The vomiting still continued, but was mitigated. It is not necessary to follow this case further into detail. The vomiting continued at short intervals for more than a week after the operation, and resisted all medicinal agents, but the general condition improved steadily; the pulse regaining its natural force, and the urine coming in proper quantity, and losing its albuminous character. He was last seen on April 17th, and said that he still recalled the taste of the amylene occasionally, and still suffered at those times from nausea. His general health, however, is completely re-established.

Meanwhile, everything connected with the operation had been going on perfectly well. A fortnight after the operation, No. 8 was passed with ease, and soon followed by No. 10. The wound is now nearly closed, and the patient passes a full stream of water; which he had not done for five years before.

REMARKS. This case is of special interest at the present moment, when the attention of the profession has been strongly excited by a fatal case of the administration of amylene, which has lately occurred in London, in the practice of Dr. Snow, and the details of which have been laid before the public by that gentleman, with his usual candour and accuracy. It is to be noticed that, from some peculiarity in the patient's constitution, he had been found particularly liable to suffer from the use of narcotics. Still, the symptoms which had followed the inhalation of chloroform, though so severe that he deliberately preferred the pain of an operation, had not excited any fears for his life. On this occasion, however, his condition was at one time desperate; and it was only by the most vigilant attention, and the constant exhibition of stimulants, that he was rescued from the alarming state of prostration into which he had fallen. The indications for the treatment of the case were sufficiently simple; for the vomiting was found to be quite uncontrollable by any medicinal measures, and, although all the usual remedies for this condition were of course employed, his recovery was owing mainly to his being kept alive by the stimulants while the system was gradually freeing itself of the anæsthetic vapour.

Another interesting point in this case is the long continuance of suppression of urine. Whether this symptom was also due to the poisoned state of the blood may be matter of doubt; but, as it had not followed the previous operation, such an opinion is at least probable.

The operation hitherto appears to have been perfectly successful, and there is every prospect of the urethra remaining permanently dilated.

II. APPLICATION OF SULPHATE OF ZINC AS A CAUSTIC IN CANCER OF THE CLITORIS AND INGUINAL GLANDS.

Under the care of J. E. ERICHSEN, Esq.

[*From notes by* I. M. DOWN, Esq.]

This case has been already reported as far as it had gone. The caustic was reapplied on February 5th, and again on February 23rd; and the surface, as the slough came away, was dressed with red wash. The abscess in the groin healed entirely, and the

sores of the vagina had much contracted when she left the house on March 5th. A small nodule, however, still remained on the labium, and will have to be again treated with the caustic.

REMARKS. This case, which was reported in the number of this JOURNAL for February 14th, is, as far as it has proceeded, an encouraging example of the benefit which may be derived from the local application of caustics in malignant diseases which do not admit of radical removal by operation. The cure, however, is not as yet complete; but it seemed better to report it now as the woman has left the Hospital, and has neglected hitherto to apply, as she was directed to do, for further treatment.

ST. GEORGE'S HOSPITAL.

EPILEPSY: ULCERATION OF THE RECTUM IN A CHILD.

Under the care of W. E. PAGE, M.D.

MARY H., aged 9, was admitted February 25th, on account of derangement of the bowels. She was said to have been perfectly healthy till two years before admission, when she got a fright from the death of two of her brothers by cholera. On admission, she was suffering from some pain in the abdomen, aggravated after food. Her face was flushed; the abdomen was slightly tumid; but there was no enlargement and no tumour, and no tenderness to pressure. The stools were lumpy and light coloured, and, when they took a solid consistence, extremely small, not larger than the stem of a tobacco-pipe. On March 1st, she complained of severe pain in the head; and convulsive twitchings came on, unattended by loss of consciousness. A more severe attack followed on March 9th, with convulsive movements of the right eye, and twitching of both arms and the right leg; but still no loss of consciousness. This was followed by a slighter fit on the morning of the 10th, and a very severe seizure on March 28th. The stools were now much more offensive, remarkably small in diameter, and contained scarcely any bile. On April 15th, she was seized with severe pain over the whole body, and became remarkably blue and cold. Slight cough was also now noticed for the first time. From this date she sank rapidly, without further brain symptoms, and died of exhaustion on the 18th.

Post mortem examination revealed nothing the matter with the brain or its membranes, except that the dura mater and the other membranes of the brain were united in one or two places by firm and apparently old adhesions to the surfaces of the cerebrum. The brain was somewhat full of blood, but otherwise healthy. There were two small vomicæ at the apex of the right lung, and both pleuræ were extensively adherent. No other disease was found, except that the lower end of the rectum, for the extent of an inch and a half, was found entirely denuded of its mucous membrane, with the exception of two small limited patches, each about as large as a fourpenny piece.

REMARKS. This case seemed worthy of notice, as an example of a state of the mucous membrane of the lower bowel rare in childhood, and of the very grave symptoms to which such a condition may lead. The epilepsy may be confidently referred to the irritation of the ulcerated mucous membrane; and, although the presence of phthisis complicated this case, still it was the opinion of those in charge of the patient that it was not the direct cause of death; nor were the symptoms such as to point to this conclusion.

ST. MARY'S HOSPITAL.

I. BELLADONNA IN INCONTINENCE OF URINE.

Under the care of SPENCER SMITH, Esq.

[*From Notes by* E. A. HART, Esq., *House-Surgeon.*]

WALTER S., aged 8, was admitted under Mr. Smith's care on February 14th. He had been operated on for stone three years before in this Hospital, by the usual lateral incision, and left the house six weeks afterwards cured. No incontinence or other bad symptom then existed. Soon afterwards (but how long is not known), being then at home, badly fed and ill cared for, incontinence of urine came on. He passed water, at the time of his admission, thirteen or fourteen times in the course of the day, without pain or scalding, and his bed was constantly wetted at night. For eleven days he was treated with cod-liver oil and steel wine, together with good diet and the usual regimen, but no amelioration was noticed. On February 25th one sixth of a grain of extract of belladonna was added to each dose of his medicine, and he was ordered to take no fluids after 8 p.m. On the third day the nurse reported that he did not wet himself so much; and he continued to improve till March 8th, when he was nearly free from the symptoms, as he hardly wetted his clothes at all during the day, and did not pass water at all in bed. At this time he fell sick for a day or two, his appetite failed, and the stomach rejected food. The belladonna was omitted for five days, and a little acetate of ammonia mixture substituted. A marked relapse took place; his clothes were saturated with urine, and the usual ammoniacal smell became again evident about his person. The stomach had now regained its tone, and the former treatment was resumed and continued till April 14th, when he left the Hospital greatly improved: he no longer wetted his clothes by day or night, and the only remaining inconvenience was that of more frequent micturition than can be considered quite healthy.

REMARKS. This case is one of much interest both on account of the great benefit derived from the administration of belladonna, of which other instances have been already quoted in this JOURNAL, and as bearing on the question of the occurrence of incontinence of urine after the operation for lithotomy. In reference to the latter point, it will be seen that the symptoms are not indeed very clearly connected with the operation as effect and cause, in consequence of the obscurity of the history. Still they seem to have followed more speedily after the injury done to the bladder, than would have been expected if they had been caused only by his return from the Hospital regimen to a mode of life, less favourable, indeed, to health, but one to which he had been previously accustomed without any such bad result; and it is known that, in children especially, incontinence of urine does occasionally follow this and other minor operations. Thus Mr. Coulson observes (*Diseases of the Bladder*, p. 86) that, after the operation for stone, the bladder often remains irritable; and, in another place, he notices the frequency with which incontinence of urine has been observed by Deschamps to follow lithotomy, and states that he has himself occasionally, but much more rarely, noticed a similar result in young subjects.

Instances of this kind are, however, as far as our experience goes, of very rare occurrence. The cure by the action of belladonna (if it should prove permanent) would be another argument for attributing the incontinence rather to the state of the bladder, than to anything in the composition of the urine or to constitutional causes.

II. OPERATIONS FOR PROLAPSUS UTERI AND RECTO-VAGINAL FISTULA, AND FOR OVARIAN DROPSY.

Under the care of I. B. BROWN, Esq.

THE interesting operation described in this JOURNAL for April 4th, appears to have been perfectly successful. The patient was kept for nine days without any action of the bowels, according to Mr. Brown's usual plan. An enema with castor oil was then given, and the bowels acted naturally. The wound was perfectly closed, and the uterus remained in its natural position. The perinæum appeared quite sound and deep; and there is every reason to hope that the woman is perfectly cured of both the disgusting infirmities under which she had so long suffered.

Mr. Brown's case of ovarian dropsy injected with iodine (see this JOURNAL for March 21) also progressed favourably. The woman left the Hospital three weeks afterwards, apparently perfectly well, and rapidly regaining health and flesh. Future observation will show whether the cure be permanent.

ST. GEORGE'S HOSPITAL.

CASES FROM THE MEDICAL WARDS.

Communicated by G. GODDARD ROGERS, M.D., Medical Registrar to the Hospital.

I. PNEUMONIA: BRONCHITIS: TRACHEITIS.

Under the care of H. BENCE JONES, M.D., F.R.S.

G. G., aged 3 months, was brought to the Hospital on March 26th, with severe dyspnœa. About ten days before, the child had been operated upon for hare-lip; and after going on well for two or three days, it probably caught cold, whilst being carried to and from the Hospital. It was not until 11 A.M. on March 25th, that anything was noticed amiss with the respiration. Later in the day, the child became blue in the face, and the extremities were cold. A warm bath was used, and mustard poultices applied to the chest, but only with temporary relief. At noon on March 26th, as all the symptoms were much aggravated, the parents brought the child as an in-patient. Salines and ipecacuanha were given, and stimulating

liniment was rubbed on the chest; but the prostration rapidly increased, and the breathing became quite stridulous. The pulse was only perceptible for a very short time after admission; and in a few hours the child expired.

At the *post mortem* examination, on laying open the larynx and trachea, a thin layer of recently effused lymph was found lining the tube from the epiglottis downwards. Just above the bifurcation of the bronchi it ceased abruptly. The bronchial lining membrane, as well as that beneath the effused lymph, was extensively inflamed. The lower lobe and the posterior surface of the upper and middle lobes of the right lung were in a state of red hepatisation. All the other viscera were healthy.

Remarks. The chief point of interest here is the example of pneumonia and bronchitis preceding tracheal inflammation, whereas they are generally noticed as sequences. The mischief in the right lung had been progressing for some little time before any croupy respiration awakened the parents to the full danger of the case; and still further proof is afforded of the croup being secondary by the *post mortem* appearances. Inflammation first attacked the lung, then the minute bronchi, and lastly, the large tubes up to the trachea. Here, inflammation being set up, the peculiar tendency to effusion of false membrane was at once manifested; and it is but seldom that one sees so strict a line of demarcation between bronchial and tracheal inflammation proper; generally, more or less of the fibrinous exudation spreads to the air-tubes.

II. BRONCHITIS: DILATATION (DIFFUSED) OF BRONCHIAL TUBES: CONSOLIDATION OF LUNG.

Under the care of H. Bence Jones, M.D., F.R.S.

R. C., aged 48, a day-labourer, was admitted on March 25th, in an extremely weak and emaciated condition. He had been ill with cough and dyspnœa since Christmas; but for years had been subject to oppression of breathing during the winter months. Coarse breathing existed all over the front of the chest, but no dulness at the apices of the lungs. Posteriorly, on the right side, the respiration was harsh, and in one or two places wanting. On the left side, a little below the centre of the back part of the lung, exceedingly well marked amphoric breathing could be heard. He expectorated abundance of puriform fluid. From time to time he had severe attacks of dyspnœa, which the medicines alleviated but little; and during one of these he sank, about five days after admission.

The body was examined twenty-one hours after death. The right pleural cavity was completely obliterated by old adhesions, which in several places were semicartilaginous, but did not display any of the microscopical characters of cartilage. The left pleura was obliterated for about a third of its extent; the remaining portion of the cavity contained about a pint of straw-coloured serum. The right lung was healthy, except that the bronchial membrane was somewhat vascular. On the left side, the tubes were loaded with inspissated purulent fluid; at the apex they retained their normal calibre, but at the base they were much distended: so that, close to the diaphragmatic border of the lung, the tubes were large enough to admit a goose-quill. One limited distension was met with in a small tube near the middle of the lung: it was large enough to contain an almond, and was full of pus. Around the dilated bronchi, the pulmonary tissue was much solidified, and sank in water. Every part of the lungs was carefully searched, but no tubercles nor vomicæ were found.

Remarks. These cases of chronic bronchitis, where profuse purulent secretion arising from the lining membrane of the tubes rapidly induces a hectic condition and carries off the patient, are among the most interesting to the auscultator. It is not often that well marked specimens of dilated bronchi occur; and when they do present themselves, it is rare to find amphoric resonance so complete as in this case. The sound was thought by some to arise from a vomica, although the situation was unusual; and the general appearance of the patient was strongly indicative of tubercular disease. Had the effusion into the pleura occupied every part of the sac, none of these phenomena would have been brought under notice; but the portion of lung containing the dilated bronchi was closely adherent to the costal pleura, and the peculiar sounds were transmitted through the stethoscope in a remarkably clear manner. There was no shifting of the sound, and therefore the notion of air in the pleural cavity was excluded; but whether the patient had tubercles and a cavity, or simply dilated bronchi and consolidated surrounding tissue, remained *sub judice* until after death.

III. PHTHISIS: VOMICA OF ENORMOUS SIZE: EMPYEMA.

Under the care of W. E. Page, M.D.

F. I., aged 23, a tailor, of irregular habits, was admitted on December 10th, 1856, in an anæmic and emaciated state, suffering severe pain in the chest, accompanied by cough and expectoration, which had been getting worse for three months. He had a quick pulse and furred tongue, and perspired profusely at night. At the upper part of the left lung, gurgling and pectoriloquy were heard. The apex of the right lung was somewhat dull on percussion; and the respiratory murmur was very coarse all over this side of the chest. Towards the end of the month, he became exceedingly hoarse, got thinner, and complained more of the night-sweats. His breathing was very short and hurried. The same auscultatory signs existed, but the gurglings were louder and more extended.

Early in January, the expectoration increased in quantity; and, as he grew weaker, he would often expectorate a pint of matter in the day. His appetite was ravenous throughout, and he lasted much longer than would have seemed possible with such extreme emaciation. Shortly before his death, some hæmoptysis occurred. He expired on April 3rd.

The *post mortem* examination was made twenty-six hours after death. On cutting into the larynx, a large ragged ulcerated opening was found on either side, below the true vocal cord. On the left side of the chest, the pleural cavity was obliterated in its upper third: the remainder of the space was distended with purulent fluid. The surface of the lung was adherent throughout to the pleura. The whole of the lung was hollowed out into one immense vomica, the walls of which were about half an inch in thickness. Crossing the cavity were bands of consolidated pulmonary tissue, five or six in number, which sank in water, and in which no air-tubes were found. The vomica was about one-third full of purulent fluid. No communication with the pleural cavity was discovered. The upper part of the right lung contained small vomicæ. The lower part of the small, and the upper part of the large intestine, were examined, and found free from ulceration.

Remarks. It is curious to compare this with the case of the patient with dilated bronchi. Both these men expectorated profusely. In the one, scrofula was the cause of the drain upon the system; in the other, simple bronchial inflammation; and, *à priori*, it seems likely that the latter form of disease would kill more slowly than the former, where fearful disorganisation was at work. Such complete destruction of lung-tissue is, I believe, rare; and, when it does occur, there is usually more hæmoptysis present than in this case.

IV. APOPLECTIC CLOT IN THE BRAIN: ENCYSTED ABSCESS OF THE CEREBELLUM.

Under the care of H. Bence Jones, M.D., F.R.S.

E. W., aged 46, was admitted on March 25th. Her friends stated that she had been ill about thirteen weeks; the original cause of her indisposition being a fall, in which she struck her head against the kerb-stone. The accident was followed by violent bleeding at the nose, headaches, and frequent vomiting of very offensive matter, which last continued until three weeks before her admission. Her family had observed before the sickness ceased a gradual failing of her mental powers. When brought to the hospital, she was partially delirious. Her tongue was very dirty; the bowels were constipated; the pulse extremely weak; and the pupils rather sluggish. She was well purged; and, as she had slight cough, a squill mixture was given. The following day, port wine was ordered on account of her great exhaustion. On March 27th and 28th, she was very delirious, and got but little sleep; and when she dozed, was continually talking or groaning. The evacuations and urine were passed unconsciously; and independently of this, a most offensive and peculiar odour arose from her body. Some pulsation was noticed in the line of the abdominal aorta, but not more marked than is often observed in emaciated subjects, nor was there any accompanying thrill. On April 2nd, she sank from exhaustion, continuing delirious to the last.

At the examination, twenty-seven hours after death, the blood was found very fluid. The skull-cap was exceedingly thick and very heavy, from thickening of both tables; the diploë existing in comparatively small quantity. Nothing unusual was observed about the membranes of the brain. The cerebral convolutions were remarkably flattened, and there was a considerable amount of clear fluid in the ventricles, but hardly enough to account for the great flattening. The arteries at the base of the brain were very atheromatous. In the left lobe of

the cerebellum was a bilocular cyst, containing healthy pus. Each partition of the cyst was about large enough to contain a hazel-nut. In the lower part of the right posterior lobe of the cerebrum was a large loose clot of freshly extravasated blood, around which the substance of the brain was much broken up. The heart was large, and its walls were very thick. It weighed thirteen and a quarter ounces. The spleen contained several small blocks of fibrine. The rest of the viscera were healthy.

Remarks. The apoplectic clot discovered in this case probably had direct relation to the atheromatous condition of the cerebral vessels; whilst the abscess of the cerebellum might have owed its origin to injury produced by the accident above named. Doubtless, the cerebellum had been the part first affected, for it is scarcely likely that so large an apoplectic clot should have existed any length of time without the occurrence of more or less paralysis. It did not appear, from inquiries made after the *post mortem* examination, that the patient's gait was affected by the fall on her head; nor did she refer the chief pain at any time to the occipital region.

Original Communications.

LECTURE ON MORAL INSANITY.

By John Kitching, Esq., Medical Superintendent of the Retreat, near York.

We are in the habit of talking very glibly of the sane and the insane, as if these terms were universally understood, and as clear as the difference between sunshine and cloud. The terms are clear enough, but in the thing signified there is often a good deal of obscurity; otherwise we should not witness, as we sometimes do, the spectacle of learned people giving evidence on different sides, when a question involving the meaning of the terms is to be decided. And if this is the case amongst persons whose studies have led them to familiarity with these subjects, how can we expect that the public at large, from whom juries are selected, and who are necessarily almost strangers to them, should accept without reluctance or gainsaying, the conclusions which would embrace in the category of insanity what they have been accustomed to call by another name—whether it be vice, crime, oddity, eccentricity, impulsiveness, intractableness, wilfulness, cruelty, passion, turpitude, or by whatever other name the thing before them may seem to them properly designated? It is a difficult thing to decide in many cases, and it is sure to come to be a difficult thing, if it were not now so. Everything that raises a serious question in these days is a difficult thing, and ought to be. The age of easy things is past: *ad majora vocamur.* Then, if we are surrounded by so many difficult things, and we battle with them with so much more alacrity and determination to wrestle the difficulty out of them, let us also face this one additional difficulty of moral insanity, and calmly examine the subject with a view to the solution of the difficulty; not turning our backs upon it with a grin of angry ridicule, as if the foundations of society were going to be uprooted, and the flood-gates of impunitive crime let loose, because an unexpected interpretation may be put upon some notorious phase of character.

The study of all mental phenomena involves difficulties of great magnitude. The operations of mind are so various, that the attempt to discover the laws by which these are regulated has engaged the profoundest attention of the most gifted men; and the greatest metaphysicians, whose science concerns mind only in a state of health, have been brought to very opposite conclusions. When, however, we turn our attention to mind in a state of disorder, an additional source of complication and difficulty is introduced: and we may cease to wonder in the presence of so much that is obscure and arduous, that men who are practically conversant with insanity should not see eye to eye on all the subtle points embraced in so comprehensive a subject. If this be a correct position, let me ask, is it at all likely that those who have no acquaintance with the changes produced in the workings of the mind by disease, should form correct conclusions respecting the phenomena of insanity? I think, therefore, there is nothing either unreasonable or arrogant in the assumption, that it is only from those who have studied the joint action of the mind and body in both health and disease that we can look for any enlightenment in the science of morbid psychology.

The broader features and more violent forms of insanity render it easy to recognise the presence of the disorder. The three principal forms in which it is thus displayed, are mania, melancholia, and the possession of delusions.

When a person is in a state of mania, his whole mental condition is changed. Instead of the calm flow of thought and feeling which characterise him in health, his ideas follow each other with rapidity; the operations of his mind are tumultuous; his feelings are impulsive; and his utterance is loud, rapid, and imperious: the physical system participates in the exaltation; the patient performs feats of strength to which he is at other times unequal; every thought, word, and action, assume an exaggerated character. The want of rest is not felt. It is as if every function of life had received an irrepressible accession of ardour and activity, and the whole economy, animal and intellectual, were carried on under high pressure. The man lives through the vital force of a week in a single day; and the process is therefore an exhausting one.

This form of insanity exists in many degrees. In its highest development it deprives the person entirely of his senses. He has no control whatever over his thoughts, words, and actions. The promptings of his brain have an absolute dominion over him. He is carried about by a mental whirlwind, which mingles in one confused jumble the rapidly generated and evanescent impulses, and breaks them up into fragments, so that there is little or nothing of continuity or coherence. The whole series of phenomena are the beginnings without middle or end; the connecting links or associations are lost, because one fresh idea is begun before the others have been followed out. A less degree of excitement allows a little more time for each suggestion; and as the urgency of the symptoms is abated, the incoherence and rapidity of all the actions is lessened till a condition is arrived at, which presents nothing more than a certain amount of ardour or excitement—not greater perhaps than that which is the natural state of a more sanguine person.

In this direction, then, we are led by gradual stages to the very confines of the disorder; and there is a "border land" of considerable breadth, which admits of doubt and hesitation sometimes, to which region it shall be consigned. With this, however, at present, we have nothing to do, and will pass therefore to the contemplation of another of those well marked forms, which at once dispel doubt, and convince the judgment.

It is the opposite of mania, and is named melancholia. This is by no means so simple a form as mania. It exists chiefly under two aspects—the active and the passive forms. In the former, the sensations are acute and the movement of the ideas rapid, but these are always of a painful and afflicting nature. Horror, remorse, fear, and apprehension, hang over the mind with an appalling, overwhelming canopy of darkness. Undefined terrors shake out the reason, and extract cries of suffering, under which the moral and physical constitution trembles with undefined dismay. Sometimes the agony assumes a perceptible shape, and concentrates itself into an absorbing and terrible delusion. Once a tender and most affectionate mother, whose Christian solicitude for the right bringing up of her children was possibly the means of overstretching her powers, was tormented by the audible cries of those dear children, who shrieked into her ears from the depths of hell, and inflicted upon her, through a diseased brain, torments less endurable than their own. The groans and cries of the active melancholic are a painful publication of their form of disease. But the same kind of insanity is exhibited in a quieter and less demonstrative way, by the silent and unobtrusive endurance of a grief which seeks no publicity, and utters no complaint. No bell tolls, no dirge is rung. The quiet luxury of the silent tear, or the half suppressed sigh, alone forms the outward sign of the worm that gnaws within; but gnaws so keenly, that the whole attention is riveted upon the working of his unseen teeth; and all the life is a prey to the absorbing grief, to the general, all embracing, indefinite sorrow, paralysing resistance, annihilating exertion, wrapping up the entire being in a shroud of dismal and helpless inertia.

> "Who art thou with anxious mien,
> Stealing o'er the shifting scene?
> Eyes with tedious vigil red,
> Sighs by doubts and wishes bred,
> Cautious steps and glaring leer,
> Speak thy woes and speak thy fear."

Like the state of exaltation previously described, this condition also goes through a wide range of degrees, varying from the deep abstraction of settled melancholy to the mere obscuration, by a thin cloud, of the usual standard of healthy feeling.

The next form of insanity to which I shall introduce you is

not necessarily accompanied by any exaltation or depression of the natural scale of the animal spirits. It consists in the derangement of the intellect, or a change in the reasoning powers of the mind, either to such an extent as to produce an entire confusion, or to destroy their proper action in certain directions. In the former case, the mental condition is characterised as one of incoherence; in the latter, some idea or belief is generally entertained contrary to all sound ratiocination, and the term delusion is applied to it. When the mind is in a state of incoherence, it is impossible to converse for a few seconds with the patient without becoming aware of his condition. If he addresses you as the King of Spain, and tells you he saved your life last night at the battle of Corunna, it is clear that his perception, memory, comparison, and judgment, are so impaired that his mind is under the dominion of a wild and extravagant association of ideas, and that his reason is powerless to check his thoughts or guide his expressions. But he may utter this absurdity in a calm and assured tone, with no violence or impetuosity of thought or feeling; and, if met with a good humoured contradiction, he may smile at your incredulity. He is often very happy in the unregulated flow of a cheerful imagination, and believes the suggestions of his fancy more implicitly than ever poet, with "his eyes in a fine phrensy rolling", could put faith in his dreams.

This, however, is a condition of mind for which, all the rational powers being impaired, and their coherency and mutual check destroyed, we find little difficulty in accounting. The intellectual functions of the brain are partially or wholly suspended, and isolated ideas and suggestions of broken memory succeed each other at random. There is a congruity and concurrence of ruin, which, however melancholy, is satisfactory to the observer. But there is a condition in which the understanding remains to a great extent entire, and still harbours a delusion on one or more subjects, perhaps quite outrageous and absurd. Correct, and even clear-headed and acute, on general topics, the individual may still cherish a delusion on some points, which creates a want of harmony in the whole mind, very difficult to comprehend. A person, whose interesting and intelligent conversation you may have enjoyed on a variety of subjects, may suddenly surprise you by the announcement that he is a great prophet, possibly a deity; that he is destined to live for ever; or that he has no liver, lungs, or heart. You may have very likely read of a patient who, when being examined as to his sanity, conducted his defence in so rational a manner that the judges were unable to detect any infirmity of mind, till some person, acquainted with the nature of his case, led him to announce that he was Jesus Christ, the Saviour of the World. Dr. Haslam mentions the case of a man who had been many years in Bedlam as an incurable patient, but who was, during his confinement, as far as could be ascertained, completely in his senses; but, whenever he went home, which he did several times, he felt uneasy, and found himself bewitched at all points. "The devil and his imps had preoccupied the best places in the house." Another patient is mentioned by the same author, who, during the time he knew him, always conducted himself in a very gentlemanly manner, whose disposition was remarkably placid, and whom he never knew to utter an unkind or hasty expression, but who still never omitted in his letters to style himself "God's King, Holy Ghost, Admiral, and Physician". Another patient is also mentioned, whose insanity consisted in a belief that the germs of sprites entered into his ears during the night, and on this account he always stopped his ears closely with wool, and, in addition to a flannel nightcap, usually slept with his head in a tin saucepan. Horace mentions the case of a man who was exemplary in all the social relations of life, kind to his wife, hospitable to his friends, etc., who harboured the delusion that he was listening to lively dramatic representations in the theatre, when he was the only creature in the building, and who would sit and applaud the wit and sparkle of the dialogues, which took place, in reality, nowhere but in his own cranium.

The delineation of various forms of insanity was a favourite subject with several of the classical writers. Readers of these will call to mind the vivid picture of the madness of Orestes, after he had slain his mother, Clytemnestra, in revenge for her treacherous murder of her husband Agamemnon, who was replaced in her affections by the scoundrel Ægistheus; also the madness of Hercules, from the torments of the poisoned shirt which the jealous Dejanira had sent him, an insidious revenge for her slighted love; the ludicrous but furious onslaught of Ajax upon the sheep, mistaking them for the enemies who had baulked him of the shield of Achilles; and, above all, the sublime and tragic madness of Medea when, deserted by Jason, she laid violent hands upon her two children, and sacrificed them at the shrine of outraged love. The copiousness of the Greek lexicon in terms relating to insanity, shows that many different forms of this malady were known to the ancient Greeks, and had engaged their discriminating attention.

These examples of delusion are sufficient to illustrate this kind of disorder. They show that the mind may be affected with insanity which at first sight seems partial, and confined to some special subjects, and on this account the kind of insanity now spoken of was distinguished by the name of monomania; mania on a single point. The term monomania is now, however, but little used.

The three forms of insanity which we have now reviewed are those which afford the most conspicuous symptoms, and which are generally conceived by the popular mind as types of the disorder, when a person is said to be insane. They present broad and unmistakable marks of departure from soundness of mind which are satisfactory and convincing. When a man is seen raving and violent, unable to control his words or guide his actions; or when he is seen brooding over some imaginary sorrow, neglecting every duty of life, and delivering himself to the sway of causeless terror, or rapt in vague abstraction; or when he utters some opinion grossly at variance with the general perceptions and common sense of mankind; or when his discourse is a jargon of unconnected words, the world is satisfied that he is insane. The justice of the verdict is accepted, his insanity accords with the popular notion of that disorder, and the judgment of all approves what belies the prejudices of none.

We have, however, by no means exhausted the wide field over which the manifestations of insanity are displayed. We have taken the mind, as it were, in its totality, and have viewed it under the influence of certain disturbing forces which place it in a condition of disorder, as a storm of wind may sweep an entire ocean, and produce wild confusion and turbulence from shore to shore. The sea, however, may be subjected to a gale which shall blow over one region, within circumscribed limits, and leave the rest in entire or comparative calm. This somewhat coarse simile may serve as an illustration of what I wish to substantiate in the following part of my discourse. We are all conscious in our own minds of the possession of many distinct faculties, and of our power of carrying on mental operations, and discharging mental functions of very different kinds. When we are following out in the pages of Adams or Le Verrier one of the grand mathematical problems by which they forced the solar system to reveal to the astronomical world its long hidden orb of Neptune, and taught the exact spot in the heavens where the remote planet might be seen; and when, filled with admiration at the reach of the human intellect, we turn and bend in humble adoration of that Great Being who created both it and the objects about which it had been occupied, and prostrate ourselves before him in humility and self-abasement, how great is the difference between the two mental operations we then perform! We are sensible of the distinctness between the faculties by which the two acts are accomplished, and that they belong to two distinct orders of psychical powers. In the one, the reasoning power is tasked to its utmost stretch. In the other, the reasoning power performs the smallest share. When we are following the glowing creations of some bewitching poet, and revelling passively in the charms of a Milton's or a Shakespeare's fancies, how differently we are employed, what a totally distinct set of mental faculties are we calling into operation from those we use when, stung by the taunts of an enemy, or roused by the opposition of an antagonist, we burn with anger or glow with a desire to retaliate! When fondly caressing our children, and mixing with a childlike glee in their young sports, for the love of seeing them happy, what different beings we are, in so far as regards mental phenomena, from the scheming, plodding, acquisitive creatures we exhibit ourselves when toiling to win from the world the wealth that is to be bestowed upon their support.

Now, if we analyse the mental phenomena concerned in the very few and every day modes to which I have just adverted, we shall find that the powers brought into operation are referrible to two distinct orders; and it is convenient to designate these as the intellectual and the moral faculties. All those powers of the mind by which we maintain our position as rational creatures, which enable us to cultivate science and art, to invent, discover, and apply, to reason, to compare, and to infer, to remember, to combine, and to imagine, are intellectual powers, and would make a rational being if he were possessed of no other powers besides. But we feel that we have other

powers. We feel that we have affections which render us kindly disposed to each other; that prompt us to love our friends and all others who love us; that dispose us to relieve the wants of those who are about us; that lead us to desire the good opinion of others, or to entertain a good opinion of ourselves; that incite us to a reverential feeling towards our Creator, to persevere in the decisions of our own will, or, on the other hand, that we have faculties which render us eager in opposing anything which we dislike, which make us triumph in the surmounting of difficulties, and resolute in the battle against oppression and injury; also that we have instincts which lead us to take every care for the preservation of our lives, and the satisfaction of our bodily wants. These various powers and faculties, so distinct from the former set, are conveniently designated by the term "moral and instinctive faculties." They are called moral, because they preside over the regulation of our conduct towards others, and determine our sentiments and affections. Now, it needs no discussion to establish the proposition, that men differ very widely in the amount of their intellectual faculties. So universally is this difference recognised, that we have no commoner phrases in the language than those used to denote the differences between men in this respect. And not only do they differ in the aggregate amount of their intellectual ability, but they differ very greatly in the power of particular faculties; and grown up men scarcely differ in these respects more than boys and children. This shows that the difference is not entirely acquired, but is innate. One boy displays an aptitude for argumentation; another, for the accumulation of facts; a third, for the composition of verses; a fourth, for the acquisition of languages; a fifth, for the construction of machinery; a sixth, for the discovery of new relations between the things he observes; and so on in almost endless variety: and, as boys grow into men, we have the intellectual world peopled with statesmen, philosophers, logicians, grammarians, orators, poets, and artists; and these all of every possible grade of intellectual power and excellence.

In the same way that it admits of no dispute that the intellect offers these varieties of power, we may observe again a difference in the relative manifestation of the intellectual faculties, as compared with the other order of faculties, which I have just called the moral faculties. A man may have intellectual abilities of the first order, and yet be deficient in those qualities which go to the composition of a good subject in his social, domestic, and moral relations. These latter faculties do not appear to hold any definite relation to the development or strength of the former. The circle of our own acquaintance may supply us with examples of men conspicuous for the zeal and success with which they cultivate science, commerce, or the arts, or the ability with which they follow out any favourite pursuit, who are, nevertheless, greatly deficient in those moral perceptions and sensibilities which are necessary for the formation of a great and useful character. How much has the history of the world and the peace of nations been disturbed by the unregulated ambition and unscrupulous daring of clever and gifted men, in whom Nature had implanted excellent powers of mind, but left them unfurnished, or scantily provided, with the controlling and humanising faculties of an equally powerful moral constitution. Had the moral faculties of such men been equal to their intellects, how differently would the history of a Cæsar or a Napoleon, or a Nicholas, have been written. Instead of being traced with a pen dipped in blood, and guided by the light of a thousand fires of sacked and burning villages and towns, inspired by the drum of war and the thunder of cannon, it would have beamed with the light of love to human kind, and would have formed, each in its time, an epoch in the advancement of the human race in the arts of civilisation, literature, commerce, and peace.

If we find, on the one hand, that great mental endowment may be consistent with a deficiency in the moral powers and affections; we also find that these latter not unfrequently coexist with a very moderate scale of intellectual development. When we see a man exercising all the offices of a good citizen, of a kind husband and tender parent, full of good works towards his neighbours, benevolent to the poor, forgiving towards his enemies, anxious to promote the welfare of all around him, increasing the amount of happiness within the whole circle of his influence, however unlearned he may be, if he be ever so unable to excel in science or literature from the want of abilities for their attainment, that man still possesses talents and powers, which, though of a very different order from those which we style intellectual, are no less surely psychical faculties, which the merely intellectal man does not possess, and which lead him to a sphere of action in which the other could no more supplant him than he could rival the other in the productions of his intellect.

This diversity in the relative prominence of the two orders of faculties towards each other, admits, I think, of no kind of doubt. We must unhesitatingly grant that it is so. It seems as clearly established as the disparity between the intellectual capabilities of one man and those of another, or as that between the strength of one man's muscles and bones, or the size of his corporeal frame, from those of another. A phrenologist might say it was all owing to the difference in the size of some part of his head or brain. I shall have something to say on this by and by. At present I wish to establish the fact on common experience and observation alone. We shall arrive at the truth by these methods, with as much certainty and clearness as if we endeavoured to establish it by arguments not so generally understood, and much more open to debate. The concession, then, of a discrepancy between the intellectual abilities of different individuals, and between the intellectual and moral faculties of the same individual, leads us to the subject of the difference between the moral faculties of one individual and those of another. Shall we question the existence of such a difference? Shall we say that if children and boys are gifted with various degrees of intellectual ability, they are all equally endowed in this respect, and that the differences afterwards exhibited are due to the comparative success or failure of education or training? to the operation of the multifarious agencies, favourable or unfavourable, to which the individual has been subjected in his earlier years. Is this the entire philosophy of St. Giles and St. James? No doubt of the vast influence of these agencies. No doubt of the substantial truthfulness of Hogarth's masterly design in the subsequent fortunes and allotments of the virtuous and disorderly apprentices. For it is indisputable, that "as the twig is bent, the tree's inclined." But is this all? Is there no difference in the original quality and innate property of the twig? I will ask the fathers and mothers whether there is not a great original difference in their children in these respects? Is there in all your children alike the same affectionateness of disposition? Is there the same degree of kindliness towards brothers and sisters? Is there in all of them an equal degree of calm and placid good temper? Do you find it equally easy to instil into all their young and tender minds the love of truth, ready obedience to orders, the forgiveness of offences, the virtue of self-denial? Can you teach them all equally the subjugation of their young passions? Are not some among them much more impetuous, irascible, vain, proud, resentful, disobedient, sensual, avaricious, and mischievous, than the rest? And are not these differences of character manifested before they can be the result of any external influences? Are we not satisfied by the irrefragable convictions of our experience that these differences are inherent in the very constitution of the children, and are also quite independent of their intellectual abilities? How often, indeed, it happens, that the brightest sparks of intellectual ability in a young child are dimmed by some concomitant defect in its moral constitution! How often it happens that the one who shines the least in this direction, is redeemed by the compensating gifts of a sweet temper and an amiable mind, and grows up, with no more advantages of care and education than the rest, to be the solace and comfort of her family, possibly much in need of them from the wilfulness and errors of that one whose intellectual endowments apparently fitted him to be their pride and ornament. If these differences exist in children before the influence of external impressions can have produced them, they must obviously be considered inherent qualities which will show a tendency to persist during the remainder of life. They grow up with the advance of years, and become more and more conspicuous as the sphere for their manifestation enlarges. Education may do very much for the individual towards their extinction; the influences of religion may do more; but the radical cause of the difference is still there; and education must greatly extend its scope, and widen the objects at which it aims, before it can strike at the origin of the evil. "A corrupt tree will bring forth corrupt fruit." Thistles will not yield figs, nor brambles grapes. The axe must be laid to the root of the tree, and it must either be prevented from bearing fruit, or the ameliorating influences must work from one generation to another, that a gradual improvement may be accomplished in each descending generation, before any grand result will be realised.

[*To be continued.*]

ON THE SECOND SOUND AND MURMUR OF THE HEART AND GREAT VESSELS, IN THEIR RELATION TO DIAGNOSIS.

By John Cockle, M.D., Physician to the City Dispensary, and to the Margaret Street Dispensary for Consumption, etc.

The following contribution has for its object an inquiry into the second sound and murmur of the heart and great vessels, in their relation to diagnosis. It is solely one of practical character; in some points, not altogether in accordance with the current teaching; and is, consequently open to the fullest discussion and criticism. The facts are stated as they occurred to me, together with such inferences as may be considered fairly warranted from the subject matter.

I shall premise a few observations generally respecting the impulse, rhythm, and sounds of the heart, before entering into the question of the special modifications in disease connected with the second sound, etc. The ordinary expression of the heart striking against the chest-wall appears inaccurate, since it is now pretty generally admitted that the heart, in the perfectly normal state, never disconnects itself from the parietes. The conditions necessary for an actual stroke are, therefore, absent. In the language of Charles Robin, "On ne peut frapper ce qu'on touche et l'on ne bat que ce que l'on ne touche pas." The apparent stroke consequently appears to consist simply in elevation of the corresponding soft structures of the chest-wall. This matter, however, is too complex to challenge from me here the arguments in its support. To pass on, then, to the rhythmic action and sounds of the heart, I may state that I have for some time past been engaged in an experimental investigation of these phenomena. Taking into consideration the retrograde course of the coronary arteries, and the fact that, during the systole of the ventricles, the blood of the coronary arteries would be prevented penetrating their tissue, it occurred to me to revive the old inquiry as to the time when the nutrient arteries of the heart were filled. I remembered the physical demonstration of Bernouilli, that, if fluid was injected into a tube of given calibre, it would pass with facility into secondary tubes, the direction of which was in harmony with that of the main branch; but if, on the contrary, the direction of the secondary tube was opposed to that of the trunk, not only would the onward current be prevented passing into such diverticulum, but that fluid would actually be drawn up into the latter from a reservoir below.

I applied, I say, at first, this argument to the action of the coronary arteries, and conjectured, from their direction with respect to the main trunk, that they must be filled during aortic systole. Subsequently I found, experimentally, that this chain of reasoning, however sound with regard to fluid traversing empty tubes, would not accurately apply to those already filled. I have consequently thus modified my view with respect to these phenomena.

While admitting fully a controlling influence of the nervous ganglia of the heart, I adopt, at the risk of being thought antiquated in my notions, the Hallerian doctrine relative to the automatic action of this organ; and contend that, with reference to the invariable sequence between the systole and diastole, it is purely one of muscular action conditioned upon the contact of the blood with its tissue.

I conceive that the heart's alternating systolic and diastolic action is, in the healthy subject, maintained by two causes; the one intrinsic—the contact of blood with the endocardial membrane; the other extrinsic—the blood injected by the coronary arteries into the proper tissue of the muscle. The necessity of the first cause—the ingress of blood from the cavæ into the auricle—seems proved by the early experiments of Bartholini, and their subsequent modification by Haller, Cardan, Senac, and others. The second cause I attempt to explain in the following manner, commencing from that period of a revolution of the heart's rhythm corresponding to the ventricular systole. At this time the auricle is dilating from the blood of the cavæ; its tissue is lax, and easily permeated by aortic arterial blood. These two acts, being simultaneous, determine at once its contraction. The contracted condition of the ventricle during this period had prevented the entrance into its tissue of the nutrient blood; but now, commencing its diastole, and filling with the blood from the auricle, the obstacle is removed, and instant contraction again ensues, as before described.

With regard to the sounds originating at the cardiac orifices, I accept the teaching of Skoda, that there are two engendered at each venous, and two at each arterial ostium.

I incline, however, to the belief that the first ventricular sound may be produced in the following manner. During the closure of the auriculo-ventricular valves, they carry, in the funnel shape partially assumed during the process, a portion of the ventricular blood back into the auricle: this layer is reinforced by blood streaming from the cavæ; so that the reaction between the lower and upper columns, the valves intervening, gives rise to the dull prolonged first ventricular sound, the upper blood-layer acting as a damper to the valve-sound. And this view leads me to consider that, during the ventricular systole, the chamber cannot be entirely emptied. If, during the period of ventricular contraction, we imagine the blood-stream divided into two columns, one rushing through the aortic mouth, the other assisting in the momentarily sustained closure of the auriculo-ventricular valves, this latter portion must, theoretically, by the nature of the contraction, be left in contact with the ventricular face of those valves, and rendering their mid portions of dome-like form, which latter condition has been recently experimentally demonstrated by Chauveau.

However this may be, one point appears clear, if the recent experiments of Dr. Halford may be considered trustworthy, that the obstruction of the blood from the cavæ into the heart annihilates the normal sounds. Some indefinite sound, it appears, may still exist; muscular bruit, the visible vibrating motion described by Haller during contraction, caused possibly by the stimulus of the blood, still existing in the coronary arteries, upon the muscular tissue of the heart. Hence we may exclude the notion of the first sound, at all events, being principally muscular.

Of the several theories proposed in explanation of the second ventricular sound, that of Julius Roger appears to me the simplest and the best; viz., that membranes may cause sound both by impact and by separation. The wedge-like column of blood traversing the auriculo-ventricular orifices may, by impinging upon the separating valves, engender sound, a certain amount of force being imparted to the blood-stream, to prevent the tendency to partial vacuum left by the relaxing ventricle. Physiologists are not clear as to the actual amount of overlapping, but it is doubtless sufficient to explain the phenomenon. And one fundamental fact is admitted by most auscultators; viz., the occasional occurrence, in the normal state, of a second sound highly intoned at the apex, while the basic sounds are weak, and, it may be, of different pitch. I shall advert to this point again, when speaking of murmurs at the apex.

The second arterial sounds are supposed to have their *maxima* at or near the mid sternum, and, for purposes of differential distinction, are recommended to be auscultated at the aortic and pulmonic cartilages respectively. Whether the information sought be gained by this procedure, has always appeared to me doubtful. To solve this point, I have recently attempted various experiments. The following was one. Two watches, of nearly equal timbre, intensity, and synchroneity, were covered with oilskin bags, and to the neck of each an India rubber tube was attached; the watches were placed one upon the other; and the tubes, after being connected at their origin, were made to diverge to a given distance. It was always impossible, upon listening alternately at the open end of each tube, to distinguish the relative position of the watches, the mean note only being heard. They were afterwards introduced into the aorta and pulmonary artery respectively of an ox recently slaughtered. Auscultation, as before, always yielded the same result. Media of different density, brought temporarily into contact with the free portion of a tube, modified the note at its open end.

It must, however, be borne in mind that synchronous with these arterial sounds, is the sudden injection of blood into the auricles from the large veins; and, from their unequivocal muscularity, it is hardly possible to conceive that this impulse can be altogether aphonous. According to a celebrated physiologist and auscultator of a certain school in Paris, Dr. Beau, although in a different sense, the auricles are said to yield under these conditions distinctly audible sound.

With respect to the second arterial sounds, it is taught by some, that the aortic sound is loudest; and this would, certainly, on *à priori* grounds, be probable, considering the area of the vessel and the stronger valves at its mouth. So far, however, as my own observations extend, I have not found this assertion practically true. I have observations relative to this point extending to one hundred cases, and I found on analysis they gave the following results.

About 60 per cent.	equal at both aortic and pulmonic cartilages.	
„ 26	„	loudest at aortic cartilage.
14		loudest at pulmonic cartilage.

The question may therefore fairly be asked, whether the loudness of the second sound does stand in a direct causal relation to the strength of the ventricular systole and the reaction of the arterial walls?

I have observed in typhus fever, fatty heart, spanæmic women, and cases of general debility, that when the first sound was decidedly weak, the second was still loud and clear. In the so called accentuation of the second sound of the pulmonary artery where it would be said to exist, it has appeared to me usually rather a forcible diastolic recoil of the artery than an accent properly so called.

Taking the second aortic sound, or its replacement by murmur, as a basis for differential diagnosis, the following points have presented themselves to my notice.

A preternatural accent of the second sound in the direct course of the aorta, to the right of the sternum, has been observed and specially indicated in some cases of aortic aneurism. I have recently had an opportunity of watching throughout a case of aneurism of the ascending aorta. The earliest symptoms were those which apparently indicated an inflammatory condition of the aorta: at this period, the only persistent physical sign appreciable was marked intensification of the second sound over the aorta. Some months later, pulsating tumour was seen and felt about the second and third right costal cartilages; the second sound still being preternaturally loud. In the early stage, it occurred to me that the loud second sound might be explained on the hypothesis that the inflammation of the aorta had induced unusual contractility of this vessel, and thus, by rendering it more rigid, making it a better conductor of sound. At a later period, the extensive thickening of the coats, by excessive deposit, might have rendered the tube a better conductor; at all events, the intensified sound could not be explained upon the hypothesis of increased recoil of the vessel, since here the elastic reaction of the vessel was impaired or even destroyed by extreme degeneration. A further argument against the loudness of the second sound being supposed to result from the injecting force of the heart, may be borrowed from Dr. Stokes. When treating of softening of the heart in typhus fever, he states, that in his 41st and 56th cases, the second sound was preternaturally loud, and in the latter case attended with impulse, while the first sound was extinct, and the impulse not appreciable by palpation. I again submit, therefore, that the hypothesis of the causal relation between the loudness of the second sound and the propulsive force of the ventricle, requires reconsideration.

It is hardly necessary to mention induration of the pulmonary tissue, excavations therein, contraction of the lung from phthisis, permitting the pulmonary artery to come in immediate proximity with the chest wall—a pathologic condition first indicated, I believe, by Dr. Sibson—enlargement of the liver, etc., as sources of intensification of the sounds. I have, however, some reason to believe that a marked intensification of the sound in the post clavicular space may, now and then, assist in the diagnosis of deposit at the apices of the lungs.

In insufficiency of the aortic orifice, the second sound is more or less perfectly replaced by murmur, soft, harsh, or musical. Such murmur, however, does not nor cannot measure the amount of patency. I have particularly observed that in some cases, in which, judging from the extraordinary collapse of the arteries, the patency was extreme, that the murmur in its physical characters differed in no respect from other less advanced cases in which no collapse was observed.

I believe enlarged experience scarcely supports the notion of Dr. Hope, that aortic may be distinguished from other murmurs by the pitch. The pitch of a murmur at any orifice infinitely varies with the physical condition engendering it. An aortic regurgitant murmur may be of so high a pitch as to approach sibilation in point of intensity.

I may add, that this distinguished observer was also decidedly in error when he stated that a mitral murmur was never audible above the level of the aortic valves. Murmurs at the orifices are not so restricted as many suppose.

There are one or two points, however, with regard to aortic diastolic murmur, which I will take leave to mention. The first is that, contrary to the opinion of some observers, I have not unfrequently found it attended with well marked diastolic fremitus even at the apex, and this in cases unattended with any excessive degree of spanæmia; and, indeed, there appears no reason why a partially rigid valve should not be susceptible of being thrown into tactile as well as sonorous vibration by the refluent current.

It is usually taught that the differential diagnosis of aortic regurgitant murmur may be, at least, in part established by the clear click of the valves of the pulmonary artery auscultated to the left. I am far from asserting this is not occasionally correct; but so far as my opportunities of observation extend, I should, in the majority of cases, deny the validity of this proposition.

When the diastolic murmur is at all intense, I believe the second sound of the pulmonary artery is always more or less obscured, and in musical murmur almost invariably so. Indeed, if we bear in mind the anatomical condition existent, and consider how readily vibrations are excited in contiguous and homogeneous structures, the difficulty of conceiving the reverse is obvious.

The limits of these murmurs again, and particularly the musical, have been too much restricted; they extend over a very wide area; at times, all over the anterior and posterior surfaces of the chest, from the epigastrium to the pubis; and posteriorly, from the vertex nearly down to the lower end of the sacrum. From their site of origin, they may, I am quite sure, from comparison of cases examined after death, extend across the apex and round the axilla to the posterior scapular region; and this without coexistent disease of the mitral valve.

Excluding from consideration some rare cases of aortic aneurism, described by Gendrin as being liable to be confounded with aortic patency, is there any other condition which gives rise to similar physical phenomena? I believe there is.

A few months ago, I exhibited, at the Pathological Society, a specimen of diseased suprarenal capsules; they were removed from a female advanced in life, who had exhibited well marked symptoms of cardiac disease: a harsh double murmur was heard, with its maximum near the base, and extending with great intensity up the aortic, and downwards to the apex, axilla, and posterior scapular region. The heart's action was somewhat heaving, and its rhythm irregular. These phenomena were persistent, and scarcely underwent any change when examined on several occasions by Mr. Robinson (whose patient she was) and myself. We considered there might possibly exist both aortic and mitral disease. After death, hypertrophy of the heart was found. The aortic and mitral valves were apparently intact; but the aorta at its arch was nearly converted into a long tube; and in its ascending portion, rough, calcified portions projected, the lining membrane being entirely destroyed.

In another case, of Dr. Hawksley's, similar physical phenomena were constantly observed, and the same irregular rhythm. After death, enlargement of the heart was found; rough, calcified projections studded the ascending aorta and its arch; a slight calcification was certainly found at the base of one of the aortic valves, but not preventing tolerably fair closure; and, to the best of my judgment, quite inadequate to the production of the intense double murmur audible over base, apex, and axilla.

[*To be continued.*]

ON THE OCCURRENCE OF AMAUROSIS IN PATIENTS SUFFERING FROM BRIGHT'S DISEASE OF THE KIDNEY.

By Holmes Coote, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital, etc.

The connexion between amblyopia, or amaurosis, and Bright's disease of the kidney, was, I believe, first pointed out in 1849 by Landouzy of Rheims, who published, in *L'Union Médicale*, a paper containing several cases in illustration of the fact, occurring in patients in whom nephritis had been produced by the use of alcoholic drinks, by exposure to damp, or by want of the common necessaries of life. It is a matter of surprise that, with the knowledge of the frequency with which extravasations of blood and other accidents occur within the cranium in persons the subject of albuminuria, the idea should not have more readily suggested itself of examining in such cases the condition of the nervous contents of the orbit, constituting, as they do, an integral part of the cerebro-spinal centre. We might in many instances reasonably expect to find there morbid changes of a similar character to those noticed on the convolutions, or in the substance of the brain, provided there were any means of illuminating the retina and the choroid behind the transparent media of the eye. I need scarcely remark, that this end is readily attained by the use of the ophthalmoscope.

When the kidneys are so diseased that the proper urinary

excretion is impaired, and the effect is felt in the general constitution of the blood, the walls, not only of the larger arteries, but likewise of the capillaries, undergo a molecular or granular degeneration, by which they lose their elasticity and strength, and are very liable to give way. In the examination of the body of persons who have died under these circumstances, I have found in the brain four or even more small extravasations of blood in the various stages, between recent effusion and complete repair. The same morbid changes occur, I believe, in the arteries of the choroid, retina, and vitreous humour, where they give rise to changes which impair or destroy vision, and may be recognised during life.

I had occasion to make an examination of the eye, a few days ago, in the following case.

Anne P., aged 50, an unhealthy looking woman, with puffy countenance and sallow complexion, was under the care of an eminent physician, a friend of my own, for a complication of diseases, any one of which was sufficient to shorten life. She had had chronic bronchitis for many years; the right cavities of the heart were dilated, and there was general anasarca; she suffered from pain in the loins; the urinary secretion was diminished in quantity, and albuminous; there was hard cancer of the right mammary gland, with similar disease of the absorbent glands extending into the neck. Three weeks ago, while under treatment, she became suddenly blind of the right eye, and continues so up to the present time. Upon examining the affected organ (April 10th) with the ophthalmoscope, I found the transparent media of normal consistence, but the posterior surface of the eye wanted the usual brilliant hue; the vessels of the retina appeared to me smaller than natural, and to cease more abruptly; the vessels of the choroid membrane were not made out with common ease. By throwing the light to the right of the entrance of the optic nerve, I brought into view three smaller and one larger extravasations of blood, the former towards the lower part of the globe, the latter directly in the axis of the pupil: they seemed to be either in the structure of the retina, or between that membrane and the vitreous humour; the usual colour of blood was apparent. In another part of the retina, there was a yet darker spot, apparently of pigment, and of uncertain character.

In such a case, it is obviously impossible to direct, for the treatment of the diseased eye, the administration of any remedies which might interfere with the management of the more serious affections of the kidneys or thoracic viscera. In all probability, this patient will have ceased to live before the completion of any process of repair in the eye; and we know by experience that absorption of blood or other fluids takes place very slowly in a diseased organ, however rapid may be the same process among tissues perfectly healthy. In such a case, the administration of mercury would be inadmissible, on account of the general condition of the patient's health; and, even if it were otherwise, I am yet to learn that mercury "promotes absorption" otherwise than indirectly; namely, by controlling the action of the smaller vessels in an inflamed part, and preventing further effusion. Such circumstances do not exist in the case now under consideration.

Although Blödig found only three cases of this combination of amaurosis and Bright's disease of the kidney during the five years he studied in the Ophthalmic Clinic of Vienna, I believe it will be found of more general occurrence—not perhaps always manifested by sudden loss of vision from the rupture of diseased capillaries and the effusion of blood, but by changes dependent on the disturbed circulation through vessels which have lost their elasticity and power of regulating the flow of blood through tissues perhaps the most delicate in the human body—changes which, though slow, are not the less sure to terminate in the disorganisation of those parts upon which depends the susceptibility to the impressions of light. Thus Dr. Heymann of Dresden found, in one case of similar nature, turbidity of the vitreous humour; in another, a sort of serous swelling of the optic nerve papilla; in another case, the retina was covered "as if by a cicatrix". I found, in a case recently examined, loss of brilliancy in the choroid—absence of defined arrangement of the arterial capillaries. The vessels brought into view appeared to be venous, and were tortuous and varicose.

The case here related illustrates the importance of studying diseases of the eye in conjunction with other branches of medicine; for, by attending to the condition of organs which may be remote, and not long ago would have been considered wholly unconnected with the ophthalmic affection, can we alone hope to be of service to our patient.

THE ANATOMY, PHYSIOLOGY, AND DISEASES OF THE MEMBRANA PUPILLARIS.

By Augustin Prichard, Esq., Surgeon to the Bristol Royal Infirmary.

[*Read before the Bath and Bristol Branch, February 19th*, 1857.]

I have ventured to introduce this subject to the notice of the members of the Society, for the purpose of pointing out one or two anatomical errors which, in my opinion, have hitherto existed in the descriptions of the membrana pupillaris and its vessels, and for the sake of bringing forward an opinion which I hold as to the office it serves in fœtal life, and also because I wish to narrate a few cases of disease of the eye, which I refer to the continued existence of this organ.

The membrana pupillaris, a clear transparent membrane, closing the pupil during fœtal life, was first discovered by Wachendorf, in 1738. Afterwards, Albinus, Haller, Zinn, Wrisberg, and Dr. William Hunter, described it about the same time, but no one of them with complete accuracy. It is a simple membrane, continuous with the *anterior* surface of the iris, quite transparent, and found at every period of fœtal life. The centre of the posterior surface is in contact with the anterior capsule of the lens. Dr. Jacob was the first British author who pointed out that the membrane exists until the ninth month of fœtal life; for it had been considered previously not to exist after the seventh—an error originating from the fact that the vessels cease to be permeable at that time; and consequently the membrane is almost invisible, and can only be demonstrated by great care. Tiedemann, Retzius, Arnold, and M. Portal, were also of the opinion that the membrane remained till birth.

I must call to your remembrance one or two facts respecting the iris, which it is necessary to keep in mind in order to understand the subject, and which, like other anatomical minutiæ, are apt to slip away from the recollection, unless there is something to induce us to dwell upon them.

In the fully developed and healthy iris, the vessels are posterior, and are covered in behind by the pigment or uvea: the vessels are tortuous and anastomose tolerably freely, the general direction being towards the pupil, where there is a more free anastomosis, miscalled the "circulus arteriosus iridis minor". The human iris, freed from pigment, is almost transparent. In the very dark eye, particularly in those of the coloured tribes, there are pigment-cells scattered upon the anterior surface, in addition to the uvea behind; but, in the blue or light coloured iris, there is no pigment in front: the colour is due to the reflection of the light through the transparent iris from the uvea, the light being decomposed, and colour thus developed by the finely divided surface of the membrane; and when the pigment has been removed by washing, there is no appreciable difference in colour between an iris that was originally blue and one that was grey, or green, or light brown.

In the human fœtus, there are vessels upon both surfaces of the iris. The posterior set passes as far as the pupillary margin, and not beyond; whilst the anterior run onwards in a straight course upon the membrana pupillaris, and, turning round at a little distance from the pupil, pass back to gain another part of the membrane, but still upon the anterior surface.

In an injected fœtus of about six months, the membrana pupillaris is seen in perfection. The iris is narrow, and not fully developed; the pupil is large; and the membrane is thin, transparent, and covered with fine vessels, visible by the naked eye, particularly if it is stretched upon a white surface. (Fig. 1.) These vessels form a series of loops upon the membrane, and occasionally one traverses the centre. Cloquet, in his memoir on the subject, says that there are thirty or forty distributed in this way; and Henle says there are from ninety to a hundred. The number no doubt varies in different specimens, for I have counted upwards of one hundred and twenty upon an injected fœtal iris, passing forwards to supply the membrane. I have also seen that a few vessels run from the posterior vessels of the iris, and inosculate with the arteries on the membrane. As the fœtus advances towards the termination of intrauterine life, whilst the membrane is still entire, the vessels are gradually obliterated, like the vessels of the posterior capsule of the lens, which become incapable of carrying red blood, and gradually disappear, leaving the organ perfectly transparent. I have found the membrane entire and transparent in the eyes of a fœtus of nine months; and I have once seen, in a specimen of

this kind taken from a still born child, one or two loops of vessels running over the margin of the iris upon the membrane, and returning to the iris, whilst the greater part of the

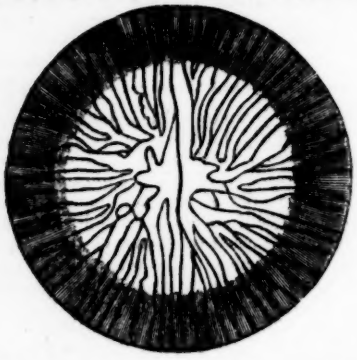

Fig. 1. The iris and membrana pupillaris of a six months fœtus. The anterior vessels of the iris are here shewn to be continuous with those on the membrane, and one vessel is seen to traverse the centre.

surface was free from vessels. (Fig. 2.) After birth, the membrane gives way, most likely from the action of the pupil; a few shreds are sometimes left, and these are gradually absorbed.

Fig. 2. The iris and membrana pupillaris of a nine months fœtus (*i.e.*, still-born, at full time). A few remaining loops of vessels are seen running from the iris upon the membrane.

In order to see the vessels properly, the iris and the anterior part of the choroid, with the ciliary ligament and body, are to be removed from the eye of a six months fœtus which has been successfully injected from the umbilical vein. The removal is done by dividing the organ into an anterior and a posterior half, removing the cornea and sclerotic from the anterior portion, and washing away the pigment from the uvea and ciliary processes by gentle agitation in spirit and water. Upon examining the posterior surface of a specimen thus prepared by the aid of the microscope and a low power lens, the ciliary processes are seen full of vessels, and from under cover of them a vast number of vessels are seen to run for a short distance in a straight course (Fig. 3), and then to turn and anastomose very freely. These vessels are solely distributed to the iris, and but three or four of them pass on to the membrana pupillaris. I have seen these arteries with very similar anastomosing branches on the back of the iris in a fœtus of nine months, where the anterior vessels were but indistinctly seen.

There is no doubt that the disappearance of the membrana pupillaris occurs at different periods in different cases; for I have often searched for it in vain in a nine months fœtus, and found the pupil perfect and open: in other words, it sometimes disappears before birth, and sometimes at that period. I have also found it present in one eye, and absent in the other.

In a fœtus of a few weeks, no trace of an eye is to be seen; but, at six or eight weeks, it is visible as a small transparent gelatinous body. In the third and fourth months, the exterior of the globe is completed, and the choroid is almost entire, but still there is no iris; but, in the fifth month, the latter membrane is first visible as a narrow blueish or brown ring. The iris is formed subsequently to the choroid; and, as soon as it is to be demonstrated, a membrana pupillaris may also be seen. A writer in Von Ammon's *Zeitschrift* says that the membrana pupillaris is present when there is no iris and no corpus ciliare, in a fœtal sheep. The vessels of the iris, choroid, and ciliary processes, are distinct. As time goes on, and the development becomes more complete, the pupil becomes narrow, until, at the ninth month, it is very narrow, and the colour of the iris is tolerably distinct.

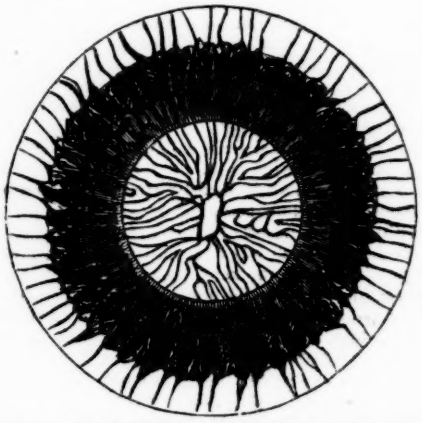

Fig. 3. The anterior half of an injected fœtal eye (six months) seen from behind. The pigment, the cornea, and the sclerotic, have been removed. The straight vessels leading to the ciliary processes are seen outside, then the posterior vessels of the iris, and in the centre the vessels of the membrana pupillaris coming from the other (anterior) surface of the iris.

Taking all these points into consideration—viz., that the membrana pupillaris exists before the iris; that the latter membrane is very narrow in its earlier stages, and gradually becomes wider; that the cause of the colour is the deposition of a posterior layer of pigment; and that the anterior vessels of the iris disappear at the same time as those of the membrana pupillaris—I am inclined to come to the conclusion that the use of this membrane is to form a substratum upon which the iris may be developed; and that the posterior vessels spring from the great arterial circle to form the iris, as others do posteriorly to form the ciliary processes; and that these are the arteries which exist permanently as the arteries of the iris during life.

As the embryo advances towards maturity, the vessels are elongated, and more pigment is deposited: in other words, the iris increases in width; and the process is probably assisted in later months by contraction of the orbicular muscular fibres at the edge of the pupil.

This view of the development of the iris, and of the use of the membrana pupillaris, has not, to my knowledge, been before laid down; and it moreover explains satisfactorily to my mind certain pathological conditions which I will briefly describe.

The disease called "central opacity of the capsule" is well known to all ophthalmic surgeons of the present day, and has been tolerably accurately described in books upon diseases of the eyes. It is a white opaque spot in the centre of the anterior capsule (Fig. 4), without any connexion with the

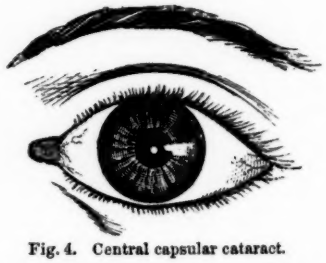

Fig. 4. Central capsular cataract.

pupillary margin of the iris. There is sometimes a corresponding opaque spot upon the cornea, and sometimes upon the posterior capsule also. It occurs in those only who have suffered in their earliest infancy from an attack of *ophthalmia neonatorum*, or the purulent ophthalmia of newly born infants, and commonly comes under the notice of the surgeon accidentally. There is little or no dimness of sight; but the prominent symptom is an involuntary oscillating movement of the eyes, rendered necessary by the central position of the

opaque spot, that a complete image of the object may be impressed on the retina.

The following cases are among those which have come under my own notice.

Case I. Richard Mathews, aged three weeks, was admitted at the Bristol Eye Dispensary on the 17th of December, 1834, labouring under acute purulent ophthalmia. It commenced upon the third day after birth, and had been allowed to run on without any particular treatment until the time of his admission. There was an ulcer upon the centre of each cornea, of considerable depth, giving an appearance as if the iris were protruding. The appropriate treatment was adopted, and the child gradually recovered from that time.

Sept. 18th, 1844. The boy is now 10 years old. He has a light corneal opacity in each eye, and a minute spot of opacity upon the anterior capsule of each lens. He is in the City School, and can see to read well.

Case II. Rosina Cole, aged two weeks, was admitted June 7th, 1843. The attack of purulent ophthalmia commenced upon the third day after birth. The left eye only was affected. Upon her admission, there was a large opacity upon the lower part of the left cornea: the discharge was profuse. The mother had purulent vaginal discharge. Under the usual treatment she recovered.

August 2nd. The eye is free from inflammation. A large white superficial opacity covers the lower part of the left cornea. There is a small white opaque spot upon the anterior capsule of this eye.

Case III. Charles Doyle was admitted on the 16th of May, 1849. There was a small central capsular opacity in the right eye. The child had suppurative inflammation when three days old, and the mother had vaginal discharge. No treatment was adopted, and the sight did not appear defective.

Case IV. Mary J. Price, aged one month, was admitted on the 10th of September, 1855. The right eye had been affected for three weeks, and the cornea was entirely opaque. On the 29th of November, the opacity was very much lessened, and there was a central capsular cataract.

Case V. Ellen Bancroft was admitted May 1st, 1853. Both eyes had always suffered. She was five years old. The corneæ were slightly opaque. There were well marked oscillatory movements. The child saw to read large letters. It was near sighted, and had a central opaque spot on each capsule.

Case VI. Ellen Price, aged five weeks, was admitted on the 2nd of September, 1853. Both eyes had been affected with suppurative inflammation for four weeks. The right was opaque, apparently in the lens. The left cornea was clear. There was still some puriform discharge.

On the 1st of October, 1856, it was found that the patient had a corneal opacity, and a large deposit on the capsule of the right eye, near the upper part of the pupil.

Case VII. Amelia Essay, aged 34, was admitted on the 29th of October, 1856. Both eyes were affected, and the sight was becoming worse. The opacity, which existed as a central spot, was becoming more obvious. This patient could not remember that any account of purulent ophthalmia, or of any inflammation of the eyes, was connected with the state of her sight. Her mother was operated on for cataract by Mr. Estlin.

Case VIII. Upon searching among the records of the operations performed by Mr. Estlin, I found the case of this last patient's mother. Sarah Oakinfeld was admitted as a patient at the Eye Dispensary, with some imperfection of the sight, and central opacity in each capsule, of the size of a large pin's head; but no rapid deterioration of sight was occurring. Some time afterwards, the lenses became more generally opaque (exactly as occurred subsequently in her daughter's case), and vision became useless. The eyes were operated on by needle; and, after two operations, the right became quite clear from the absorption of the lens; and the other became amaurotic, in consequence of the irritation produced by the presence of the cataract in the anterior chamber, having escaped from a laceration in the capsule.

Case IX. John Leaman, aged ten days, was admitted on the 21st of August, 1839, suffering from purulent ophthalmia. The left eye was entered in the book as having the cornea sloughed; and the note, which is in Mr. Estlin's handwriting, says, "There was a burst of aqueous humour while examining it." The other eye was tolerably clear.

I saw this patient again a few months ago, when he was nearly 18 years of age; and it is a matter of considerable interest to notice how the eye had recovered itself during the time that had elapsed, leaving permanent signs of the actual mischief produced by the inflammation. There is a corneal opacity in the lower and inner part of the eye, with a distorted pupil, which has been drawn down to the point where the rupture took place. There is a spot of opacity upon the capsule of this eye, of about the size of a small pin's head; it is also situated rather to the inner part of the eye.

Case X. Elizabeth Lease, aged nine months, was admitted on the 10th of September, 1856. The right eye only was affected. She had purulent ophthalmia three days after birth. There was a small corneal opacity, and a small central capsular cataract. The left eye was perfect. No treatment was adopted.

In most of the works on ophthalmic diseases this peculiar condition of the capsule is referred to general inflammation, or increased vascularity of the eye, spreading from the more superficial membranes in the cases of severe purulent ophthalmia; but no kind of explanation or reason is given why there should be a deposit of this peculiar appearance and position, instead of cataract in the ordinary form.

The most accurate description has been published in a thesis by Dr. Beck, printed at Leipzig in 1830. The author says that the general congestion and increased activity of the circulation in the whole of the eye having prevented the usual obstruction to the course of blood in the arteria centralis retinæ and its branches upon the posterior capsule, which takes place ordinarily at birth, the consequence is thickening and deposit upon the posterior capsule from the artery itself, and upon the anterior capsule from the branches which he considers to be distributed to this part of the eye; and with this opinion Von Ammon coincides.

The formation of the posterior opacity by the arteria centralis retinæ, as described by these authors, is very reasonable and intelligible, and is undoubtedly the true state of the case; but the attempt to attribute to the same cause the production of the deposit upon the anterior capsule fails most completely upon anatomical grounds, for there are no vessels to be demonstrated upon the middle of the anterior capsule. I believe that the following explanation will be found satisfactory with regard to the anterior opacity, and will account for the introduction of these cases in the present paper.

I have already shown that at the termination of the ninth month of fœtal existence the membrana pupillaris still exists, and is, to a certain degree, supplied with vessels; whilst in some cases it is entirely wanting at that period. It is obviously impossible that the membrane and its vessels can disappear instantaneously; and we can easily understand how the highly increased vascularity of the whole eye, which is so obvious in the ophthalmia neonatorum, can cause the reappearance or redevelopment of the vessels which had so recently become obstructed, or can prevent their becoming obliterated, as it probably also does in the case of the arteria centralis retinæ and its capsular branches. We must also keep in mind the fact before mentioned, that the centre of the membrana pupillaris is in contact with the anterior capsule of the lens. The subsequent adhesion of these parts is an almost necessary consequence of the inflammatory process, which has thus spread from the superficial parts of the eye.

The remaining stages are easily understood: the eye gradually recovers from the inflammation, and becomes capable of bearing exposure to light; the membrana pupillaris is ruptured, and disappears as usual; but the central portion is still adherent, and remains an indelible spot upon the anterior capsule.

This explanation of this morbid condition of the anterior capsule of the lens meets every difficulty of the case, and appears to me to be the only way in which we can at all intelligibly account for this peculiar deposit. The posterior opacity may arise, as Beck and Von Ammon have described it.

The following case is one where the entire membrane existed after birth in an opaque condition, and where an operation failed to give sight.

Case XI. Thomas Stone, aged fifteen months, a poor weakly child, was admitted in August of last year. The pupils were of about the size of pin holes, filled with opaque matter, adherent to the iris. Belladonna had no action. He obviously saw the light, but the eyes were small and rather soft.

Aug. 8th. I introduced a fine curved needle through the cornea, and tried to drill a hole in the right pupil, and but partially succeeded. I then passed a straight needle in from behind, and drew back the opaque membrane which filled the left pupil, and it did not rise again. The child was cutting its teeth, and had swollen and suppurating gums on the third day after the operation.

The gums were lanced, but on the fourth day it was heavy and dull, and on the fifth it died. No *post mortem* examination was made.

I have met with the following case of extreme rarity, which, if my idea of the pathology of this central opacity is correct, will illustrate the disease, as well as one point in the early development of the eye which I have brought forward, viz., the existence of the membrana pupillaris before and independently of the iris.

I have before mentioned that the choroid is early formed, that the iris and the ciliary body are the results of a fresh effort (as it is called) of the "nisus formativus"; and we know that in certain rare instances the iris is entirely wanting, although it is probable that the membrana pupillaris exists. The case which I am going briefly to narrate is one of congenital absence of the iris (or irideremia), where there was, by coincidence, also a central opacity of the capsule.

Case xii. A child was admitted at the Eye Dispensary about ten years ago with complete absence of the iris. It was six months old, and was brought because it was supposed not to see. The posterior chambers were fully exposed, and presented the red reflecting glare round the edge of the lens, usually seen in these cases; in the left eye there was a central spot of opacity upon the anterior capsule, which gave a very peculiar appearance to the eye. The mother was healthy. The child disliked the light, and shrank away from it. I saw it again after a considerable time, and found that it had become a little more used to the light, but otherwise its state was the same.

The following question will most probably occur to my hearers: If inflammation of the membrana pupillaris and its adhesion to the capsule are the cause of the central cataract, and if the inflammation of these parts is merely an extension of disease from the superficial membranes of the eye, why do we not more frequently see central cataract, when we so frequently see cases of acute purulent ophthalmia in newly born infants? The proportion of cases of acute purulent ophthalmia in infants to the entire number admitted to an Eye Dispensary or Hospital is probably about one in sixty; whilst the proportion of instances of central cataract is about one in several thousand cases. In reconciling this great disparity, we must remember that for the production of such a result as this deposit, there must be a coincidence of at least two distinct conditions. The inflammation must be unusually severe even for these cases, and it must have attacked the eye soon after birth, with a tendency to spread to the internal parts; and, secondly, the membrana pupillaris must be entire, and some vascular connections with the iris must remain. Now, when we combine the probable rareness of this latter condition with the chances which this individual has of suffering from purulent ophthalmia, we shall be able to understand the cause of the very great comparative rareness of the central capsular cataract.

Gulstonian Lectures:

ON

DIABETES AND SACCHARINE CONDITIONS OF THE URINE.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, FEBRUARY 25th, 27th, and MARCH 4th, 1857.

By Alfred B. Garrod, M.D., Fellow of the Royal College of Physicians; Professor of Materia Medica, Therapeutics, and Clinical Medicine, at University College; and Physician to the Hospital.

Lecture II *(concluded)*.

We will next endeavour to throw some light upon this obscure disease, and discover what is its real and intimate nature; in this pursuit we shall find that many and diverse opinions have from time to time been held, most of them having facts, obtained either from morbid anatomy or the symptoms presented during life, in their support. In passing the most important of these hypotheses in review, we shall have to detail the principal morbid appearances which have been found after death, and shall thus include the morbid anatomy of this disease.

The first, and perhaps the most ancient theory, refers diabetes primarily to a disease of the kidneys, either functional or organic. Such was the opinion of the ancient Greek writers and of Galen, and within the last half-century it has been supported by Watt, Cullen, Mason Good, and many other high authorities. It is an hypothesis which must naturally occur to the mind, seeing that the most important symptom of the disease has direct reference to the renal organs; morbid anatomy also appears at first sight to favour this view, for the kidneys are generally found much hypertrophied, the vessels enlarged and often very congested. In some cases of diabetes where I have had an opportunity of testing this point, I have also found such a condition. At times, however, especially when the disease has not been of long standing, the kidneys have presented a normal appearance, as seen by Andral and Christison; and in certain instances, they have been even contracted. In four cases in which the kidneys were weighed, I obtained the following results.

	Right kidney.	Left kidney.
D. H., a very attenuated phthisical patient	4½ oz.	5 oz.
E. H., male	4½	4 oz. 6 drs.
H. B., female	7½	8
J. B., male	7	7½

The advocates of this view of the pathology of the disease have assumed that sugar is not present in diabetic blood, and suppose that in saccharine diabetes, the kidneys, being in a morbid state, not only secrete an increased quantity of urine, but also possess the power of *forming sugar* from the blood. Dr. Elliotson, who was inclined to favour this hypothesis, makes the following remark in his lectures: "The absence of sugar in the blood, and the very frequent absence of dyspepsia, or anything connected with the stomach, except the hunger (which the excessive loss will explain), makes it appear most probable, that the disease is situated in the kidney."

At the present day, it is scarcely worth pursuing this hypothesis further; for, as I shall show you, diabetic blood taken from either the arterial or the venous system is always rich in sugar, and the abnormal presence of this principle cannot be explained by the irritation or altered action in the kidney itself. Again, although the kidneys have for the most part been found altered in structure, yet increased function would be quite sufficient to account for this change; and, that it *is* so produced, is rendered probable by the fact before alluded to, that in recent cases, no enlargement or morbid appearances have been observed. Lastly, we find instances in which the kidneys have for a very long period of time secreted enormous quantities of urine, and yet no trace of sugar has been found in it; and other instances, when a strongly saccharine condition of the urine exists without any notable diuresis.

An enlargement or simple hypertrophy of one kidney may be artificially produced in the lower animals by the extraction of the other; an increase of work is accompanied by an increased volume; it has also been found that the frequent injection of saccharine fluids into the veins of an animal sometimes induces an inflammatory condition of the kidneys.

By very many physicians, both of the present and of former times, the origin of this disease has been located in the stomach; and the important names which are found arrayed in support of this view, show the favour in which it has been held.

The arguments and facts were very forcible, and until recently, almost irresistible. In many cases, the stomach has been found after death in a morbid condition, often preternaturally large, with considerable thickening of the coats, a vascular state of the mucous membrane, and other signs of irritation. When no very distinct evidence of disease could be brought forward, it was explained by supposing that the error had been functional only, of which the ravenous appetite and dyspeptic symptoms have been regarded as proof. The experiments made some twenty years since by Mr. M'Gregor have been likewise usually adduced by the advocates of this theory. This gentleman fully confirmed the discovery of the existence of sugar in the serum of the blood of diabetic patients, which had been previously announced by Ambrosiani and Maitland; and he afterwards proceeded to further researches which have usually been considered as favouring the doctrine of diabetes arising from an error of the primary assimilating process: whether they do so in reality, we shall now proceed to inquire.

Mr. M'Gregor, by the use of emetics, procured the partly digested matters from the stomach of a diabetic patient, and found that fermentation by yeast could be readily induced in them; the same, however, took place, though in a less degree, when a healthy subject was substituted. He next fed the two individuals for three days upon roast beef and water, having on the previous day administered to each an emetic and purgative, for the purpose of completely clearing out the alimentary canal;

three or four hours after the next meal, the contents of their stomach were procured by an emetic of sulphate of zinc, and after due preparation, submitted to the action of yeast; those from the healthy man gave no evidence of sugar, whereas in the vomit from the diabetic patient distinct fermentation was obtained. Mr. M'Gregor also obtained sugar from the alvine discharges of diabetic subjects. This discovery of sugar in the alimentary canal, when a purely animal diet had been taken, and therefore quite free from amylaceous or saccharine matters, has been held, as a proof, that in these cases the stomach possesses an abnormal power of *forming* sugar from nitrogenised principles: but I apprehend that we need not have recourse to this explanation; for if the blood contains sugar in any abnormal proportion, as has been fully proved to be the case in diabetes, the secretions from this fluid may also be rich in this principle, and among others, the gastric and intestinal juices; Mr. M'Gregor himself discovered it in the saliva.

Sugar is found in the serum derived from blisters applied to diabetic patients, and I have likewise discovered it in some blebs similar to those of pompholyx, which occurred in one of my patients labouring under saccharine disease. There appears to be some doubt as to its existence in the perspiration of such subjects; though Dr. Willis, in his work on urinary diseases, states that he has known the furfuraceous cuticular exfoliation of the legs to be distinctly sweet to the taste.

M. Bouchardat supposes that in the stomach of diabetic patients a peculiar secretion takes place; that a species of ferment or diastase is present, which possesses the power of converting starch into sugar; this, however, has been found to be a normal change in the duodenum, and induced probably chiefly by the action of the pancreatic fluid.

Dr. Macintyre was of opinion that the stomach is primarily in fault, and adduced, in support of his views, certain cases in which perforation of the coats of this viscus has been found after death, an effect he attributes to the altered character of the gastric fluid; but we know that this corrosion may happen in many other diseases; whether it is more common in diabetes has not been determined; but considering the great activity of the digestive functions which then so often occurs, it is not at all improbable.

Many have regarded diabetes as arising from some altered condition of the blood, from some error in what has been rather obscurely named the secondary assimilating process, or in those changes which matters introduced into this fluid undergo before they become a portion of the solid frame or are eliminated from the system.

Dr. Willis was the first who advocated this doctrine; and the following passage gives a summary of his views on the pathology of this affection. He states, that "diabetes is rather an immediate affection of the blood than of the kidneys, and thence derives its origin; for the mass of the blood becomes, so to speak, melted down, and is too copiously dissolved into a state of serosity; which is sufficiently manifest from the prodigious increase in the quantity of urine, which cannot arise from any other cause than from this solution and waste of blood." Many have been the supporters of such an opinion, among whom may be mentioned the name of the great Sydenham; but, at the present day, more definite explanation than that of a mere abnormal waste of the nutrient fluid is required to satisfy pathologists. It is an explanation, also, so general in its character, that it may be applied to various other diseases besides the one under consideration. The late Dr. Prout, who perhaps had more diabetic patients under his care than any physician before or since his time, and who did so much both in advancing the knowledge of organic chemistry, and in applying this knowledge to the study of medicine, held opinions as to the pathology of this affection which, however profound and plausible at the time they were promulgated, cannot, I think, be now regarded as correct. Dr. Prout considered—"1. That the assimilation of the saccharine principle is a distinct function; 2. That the cellular tissue represents the saccharine aliment; 3. That a secondary assimilating process, analogous to that in the digestive organs, is constantly going on in all parts of the body; and lastly, that an important function of the kidneys is of a disorganising character—that is, consists in the reduction of organised into crystallisable compounds." And it was his opinion that "the proximate cause of diabetes lies partly in the assimilating organs, and partly in the kidneys; and may be thus stated. When *crystallised* sugar is taken into the stomach by a diabetic individual, it is reduced to a low state, remains more or less unassimilated, and passes through the system to the kidneys, by which organs (being already crystallisable) it is separated unchanged. When *organised* saccharine principles, as farinaceous matters, etc., are taken into the diabetic stomach, they are, in the first place, reduced to the form of *low* sugar, part of which is assimilated as in the healthy stomach, while another portion is modified or remains unassimilated. The portion that is assimilated is applied to the purposes of the economy: the portions modified and unassimilated pass together through the system to the kidneys, by which glands the portion modified is disorganised, and finally appears in the urine as crystallisable sugar, along with the portion originally remaining unassimilated in the stomach. The same remarks are applicable to gelatinous, and, in extreme cases, perhaps, to albuminous and oleaginous aliments. The *secondary* assimilating processes in diabetic individuals participate in the derangements of the primary processes just detailed; that is to say, the gelatinous tissues are either reduced to sugar, and thus not assimilated at all, or they are imperfectly assimilated, or they are malassimilated; in all which conditions the saccharine principle derived from the gelatinous and other tissues may be supposed to pass through the system to the kidneys, by which organs, like similar matters brought from the stomach, the various modifications of the saccharine principle are further disorganised, and converted into crystallisable sugar."

On examining this explanation of the cause of the disease, we shall discover that there are many points of which no demonstration can be afforded. Modern chemistry does not recognise a distinction between the different forms of sugars spoken of by Dr. Prout, nor has any proof been given of the assimilation of sugar by the animal economy, in the sense just alluded to; that is, of its being ever built up into animal tissue. From what we now know of the changes occurring in the animal economy, it would appear that they are mostly of a disintegrating nature; that, on the other hand, it is to the vegetable organisation that we owe the construction of complex principles from the simpler combinations; and, lastly, it would be scarcely worth while to go into much detail in refuting this view, as important recent researches have indisputably proved that sugar is produced in the system by a special formative organ.

Others have imagined that diabetes is induced, not from abnormal *formation* of sugar in the animal economy, but from a loss of *destructive* power over this substance occurring in the system; that is to say, the sugar, either taken as such into the stomach, or formed from amylaceous matters, does not undergo the ulterior changes as in health; and hence the blood becomes impregnated with this principle, which is afterwards eliminated by the kidneys. Dr. Bence Jones remarks, when speaking of amylaceous digestion, that "the changes which occur in health may be represented by the following series—starch, dextrine, sugar, vegetable acid, carbonic acid;" and that diabetes may be represented by supposing the changes stopped short at sugar; and that, from some cause, the conversion of the sugar into the vegetable acid and carbonic acid does not take place. Dr. Jones, at the same time, makes the same objections to this theory, to which we shall presently allude.

M. Mialhe of Paris, assuming the theory just propounded to be correct, has endeavoured to proceed a step further, and to explain why such an arrest of change takes place—why sugar, which is evidently *formed* in the healthy body, ceases to undergo the next series of changes. His theory is as follows: that, in health, the blood is alkaline; and that this condition is necessary, in order that the sugar constantly introduced into it may undergo the proper changes, and be resolved into carbonic acid and water; that a diabetic condition is induced whenever this alkalinity is diminished to such a point that the tranformations just spoken of are no longer possible. This condition of the system, he believes, may be induced by various causes, as suppression of the perspiration, which is naturally acid; the too free use of acid drinks, and of acid fruits; the exclusive use of an azotised diet, containing much sulphur and phosphorus, giving rise to a large quantity of sulphuric and phosphoric acids, and thus neutralising the alkaline bases of the blood.

There are many points about M. Mialhe's hypothesis which are at first satisfactory to the mind. It explains readily what really appears to be a frequent cause of diabetes, namely, the occurrence of suppressed perspiration, and the taking of large quantities of beer and acid fluids; but, when closely examined, the theory will, I believe, be found very defective; for no proof has as yet been given that diabetic blood is *less alkaline* than the same fluid in health: and this would certainly be the case in a marked degree if the non-destruction of sugar were due to this cause; and, again, therapeutic treatment founded on this basis has certainly, in most instances, signally failed. How happy would it be for the diabetic community

were M. Mialhe's doctrines correct! How readily could a sovereign remedy be found for their malady! In our next lecture on the therapeutics of our subject, I shall have occasion to bring forward evidence of the real value of the proposed alkaline treatment.

I may remark, before quitting this part of the subject, that, in the system of diabetic patients, other oxidisable substances, where the products of the decomposition are readily discovered, appear to undergo decomposition: for example, acetate and tartrate of potash are resolved into carbonate of the base; and salicine, when administered, can be discovered in the urine as saliculous acid—an effect due to oxidation. For this last fact, I am indebted to Dr. Ranke.

Within the last few years, most important facts have been brought forward, throwing considerable light upon the nature of the glycogenic function of the animal body—facts which must necessarily tend, ere long, to give us more correct views of the nature of diabetes. It is chiefly to M. Claude Bernard that we owe these important additions to our knowledge. It had generally been contended, in spite of many and trustworthy statements to the contrary, that the whole of the sugar found in the animal body, both in health and disease, was derivable from saccharine or amylaceous principles; and that no sugar could be produced from albuminous, gelatinous, or other nitrogenised matters. This, however, has now been demonstrated to be erroneous. M. Bernard has shown that all animals, including man, possess the power of forming sugar; that this function is located in the *liver;* and that, as the other organs of the body are impregnated with the products of their secretions, so the liver of the healthy animal always contains this principle, which can be easily extracted therefrom. He has likewise shown that, in health, it is *only* from this organ that it can be obtained. To prove this, we have merely to take a portion of hepatic tissue in a fresh state; bruise it thoroughly in water; boil, in order to coagulate the albuminous matters, and afterwards filter. The liquid portion gives unequivocal evidence of the existence of sugar, by the potash and copper tests before spoken of; and, when fermented with yeast, yields carbonic acid and alcohol. From a portion of a bullock's liver weighing 82,150 grains, M. Bernard obtained, in one experiment, a quantity of sugar corresponding to 651 grains in the entire organ, or 1·79-100 of the weight of the liver. He has also examined the livers of several men who had been executed, or had died suddenly from accident; and in all cases found this organ rich in sugar, the percentage varying from 1·10 to 2·14. The investigations on this important subject have been extended over almost every class of animals; and sugar has been found in the livers of members of the articulata, mollusca, crustacea, fishes (cartilaginous and osseous), chelonian, saurian, ophidian, and batrachian reptiles; in various birds, and in a great number of mammiferous animals. Some differences are discovered in the relative amounts of sugar yielded by the livers of different animals, and in the cold blooded it is less than in birds and mammalia. These experiments have now been repeated by many observers, and it appears placed beyond doubt that the livers of animals killed when in a healthy state are rich in saccharine matter: at the same time, the other organs are destitute of this principle. It will be observed that the food of the animals whose livers have been subjected to this analysis is of very varied character; in some, the diet is purely vegetable; in others, entirely animal; and, in a third class, of mixed nature; yet sugar has been found alike in all, and in an equally large amount in carnivora and in herbivora. To prove that the sugar is not obtained from any saccharine or amylaceous matters in the food, but is simply derived from nitrogenised principles, M. Bernard has fed dogs for six and eight months exclusively with meat, and still found the same proportion in the liver. The experiment has likewise been repeated on owls fed for three months on bullock's heart, and with the same result. To demonstrate even more conclusively that the sugar is formed in the liver, M. Bernard has made the following experiment. He has kept a dog without food for thirty-six hours, and afterwards fed it copiously with cooked sheep's head. After three hours, when in full digestion, the animal has been killed by pithing, and the blood collected both from the venæ portæ and also from the hepatic veins; that from the vena portæ, or before entering the liver, has given no trace of sugar by any of the tests; but the blood from the hepatic veins gave an abundant precipitate with the copper test, and also fermented on the addition of yeast. To make the experiment, if possible, still more conclusive, the meat with which the animal had been fed was examined, and proved not to yield a trace of sugar.

M. Bernard has proceeded a step further, and has shown that, within the liver itself, after removal from the body, sugar is capable of being formed. To demonstrate this, he has carefully removed the organ from a full grown, vigorous, and healthy dog, which had been killed about seven hours after a full repast of tripe, by pithing the medulla oblongata; he then, before the blood had coagulated, passed a continuous stream of water through the liver, by attaching a gutta percha tube to the vena portæ, and connecting it with a tap. After the blood had been washed out, and the water escaping from the hepatic veins colourless and free from albumen, the washing was continued for a short time. It was found that the strongly coloured water which flowed from the hepatic veins at the commencement of the experiment was saccharine, but that, when the colour disappeared, sugar could no longer be discovered in the fluid. The tissue of the liver was afterwards examined by the method I have before mentioned, and a complete absence of sugar proved by the negative results given by the copper and fermentation tests. However, on leaving the liver for twenty-four hours, distinct evidence of this principle was obtained. The sugar thus found could only have resulted from its formation within the twenty-four hours from some of the insoluble matters left in the organ after the first washing. This experiment, therefore, proves, if proof be wanting, that sugar can result from albuminous or other principles present in the liver. M. Bernard has found that, after a short time, no further saccharine formation goes on, but the ordinary decomposition ensues. It has been ascertained that a high temperature completely checks this formation of sugar. If, for example, a washed liver be divided into two equal portions, and one half exposed to the air, without any preparation, but the other half boiled, and afterwards exposed for a few hours, sugar will be found in the first half, but no trace in the second. It appears, from these researches, that one most important function of the liver is to secrete sugar from portal blood, and this *irrespective* of the nature of the food, and for a time even altogether independent of it. This function of the liver appears to be totally distinct from its bile-secreting office, and, as has been observed in some of the lower animals, not to be isochronous with it. The knowledge of the glycogenic function of the liver enables us to explain much which was before obscure in the physiology of respiration: how, for example, one and the same material—namely, sugar—destined for the supply of this process, is provided for in animals of every species, and with every variety of aliment. This discovery has also taught physiologists that there may be internal as well as external secretions; that is, secretions where the products, in place of being eliminated from the body, are thrown directly into the circulating fluid; the liver throwing *bile outwards* (a fluid containing no saccharine matter), and *sugar into* the blood itself. May not this fact give some clue to the function of certain organs, as the spleen, suprarenal capsules, thymus, etc.—glands destitute of excreting ducts? In order that the liver should secrete sugar, certain conditions are necessary; remove these, and the glycogenic function ceases. For example, if the pneumogastric nerves are cut in a rabbit or any other animal, and life is preserved for some hours, no sugar is afterwards found in the liver, because the glycogenic function of the liver ceases when the nervous influence is cut off, and that which previously existed in the organ is removed and destroyed by the changes constantly in operation. This even happens when the animal is freely digesting amylaceous matters at the time of the operation. Our knowledge of this fact enables us to explain why, in acute and severe diseases, the urine of a diabetic patient often becomes less saccharine, or even free from sugar; and why, also, the principle is not ordinarily found in the liver, except death has occurred suddenly, even when the patient was previously diabetic.

M. Bernard was led, by a train of reasoning which has since proved to have been erroneous, to discover a remarkable fact, one which has excited much attention among physiologists: I allude to the artificial production of saccharine urine by the irritation of the floor of the fourth ventricle. The experiment is thus performed. A healthy animal, either a rabbit or dog, is chosen, and the urine shown to be free from sugar by the different tests for this substance; a small instrument is then introduced through the walls of the posterior part of the cranium, in such a manner that the floor of the fourth ventricle can be reached; and this portion of the nervous structure is irritated by means of a fine point, and in such a manner as only to injure the upper stratum of fibres of the medulla oblongata, which constitute the floor of this ventricle. After a short time, usually from half an hour to an hour, if the operation has been successfully performed, the urine becomes sac-

charine to such an extent that sugar can be readily discovered by all the tests. This abnormal condition remains for several hours, sometimes for a whole day; at the same time, the quantity of the renal secretion is not unfrequently augmented. It was at first thought that the appearance of sugar in the urine in such experiments was due to the irritation being directly propagated by the pneumogastric nerves to the liver, but this has since been found not to be so; and these nerves, in respect to the glycogenic function, act simply as incident nerves; and, when divided in the neck, saccharine urine can be produced, not by irritation of their peripheral extremities, but by causing the influence of the irritation to be propagated to the medulla from their central extremities, and thus to the liver through the medium of the spinal cord and splanchnic nerves.

Before quitting the subject of M. Bernard's important investigations, it is necessary to state, as pertaining most closely to our subject, that no greater amount of sugar was found in the liver of animals fed on amylaceous substances, than when an exclusively meat diet was employed. He deduces from this, that no more sugar then enters the hepatic blood. I do not think this is necessarily a true deduction. We must remember that the animals upon which the experiments were made were in a state of health; in disease, the results might be different. M. Bernard thinks that the amylaceous and saccharine matters are converted by the liver into oleaginous substances, and in support of this opinion brings forward many facts.

Reviews and Notices.

The Journal of Psychological Medicine and Mental Pathology. Edited by Forbes Winslow, M.D., D.C.L. April: 1857.

This is a capital number of this interesting quarterly. The great work of M. Morel, on the *Degeneracy of the Human Race*, is reviewed at length by the editor, in an article which gives an admirable view of the author's ideas on this very important subject. We think ourselves that M. Morel cannot substantiate his position that there are now more numerous agents which act as degenerators of the race than at any previous period: in fact, we think that an extended view of the subject points in the opposite direction. Nevertheless, his work furnishes an immense amount of matter which will startle the psychologist.

Dr. Webster's papers on Foreign Pauper Lunatic Asylums have culminated this quarter in a most interesting account of the great Pauper Lunatic Colony of Gheel. It appears to us that the publication of this paper will do much toward silently revolutionising our present system of detaining pauper lunatics in large asylums, conducted on principles analogous to those only to be found in our workhouses and prisons. At Gheel, 800 pauper lunatics are distributed among the 8,000 inhabitants of this district of the Low Countries—not in a few large buildings, but dispersed in twos and threes among the different households. The domestic system of treatment is here carried out to its full extent. The lunatic, instead of forming one of a herd shut up in wards and confined in dismal airing courts, partakes freely of the *family life* of the people; restraint in the form of walls, and locks, and bolts, and a separation of the sexes, are unknown: nevertheless, the average number of cures is higher than in the expensively built asylums of England. Every medical man interested in the treatment of the insane should make a point of reading this most interesting paper.

A very instructive Report on American Institutions for the Insane is extracted from the *American Journal of the Medical Sciences*. The other articles which make up this journal are, the Physiology and Psychological Phenomena of Dreams and Apparitions; the Psychology of Spinoza; on Civilization and Insanity, by Dr. F. Parigot, late Inspecting Physician to Gheel—an admirable paper; Physiological Psychology; on Marriages of Consanguinity; Pathology of Insanity. We have not seen so good a number of this quarterly as the present one for a long time.

Illustrations of the Pathology of Cancer. By John Zachariah Laurence, F.R.C.S., Surgeon to the Northern Dispensary. pp. 59. London: T. Richards. 1856.

This little work is a reprint of some papers which originally appeared last year in the Association Medical Journal. Of the able manner in which the author has discharged the difficult task undertaken by him, our readers have already had ample opportunity of judging. It therefore only remains for us to notice the fact of the publication of Mr. Laurence's papers in their present form, and to recommend the book as a highly valuable contribution towards the elucidation of that obscure and difficult subject—the pathology of cancer. Great praise and hearty thanks are due to Mr. Laurence for his labours.

British Medical Journal.

SATURDAY, APRIL 25th, 1857.

THE RECENT TRIAL OF ALFRED MATCHAM FOR MANSLAUGHTER.

In our number for last week, we commented at some length upon a few points arising out of the trial of Alfred Matcham for manslaughter, reserving others for future consideration. In the mean time, however, we have had access to sources of information not previously available, and have thus been enabled to correct some of our conclusions, and to lay before the public an amplified and more accurate version of some matters which have hitherto been imperfectly detailed.

The facts of this case resolve themselves into three groups: those which relate to the medical history of the case; those connected with the trial; and those which are known as to the career and character of the man.

The medical history of the case, owing to the want of requisite knowledge of such matters on the part of the counsel for the prosecution, was very meagrely elicited at the trial. In brief, it amounts to this. A young and well formed woman, who had borne four children, again became pregnant. At the fifth month, about the middle of last June, some indisposition came on, which, in the defendant's voluntary statement, was represented as inflammation of the kidneys, of such a character that her recovery was thought impossible. Now, it must be remarked, that this assertion was only brought forward at the inquest after the result of the *post mortem* examination was known to Matcham, and that at the trial the husband had no recollection of any such alarming illness.

It so happens, however, that we have before us, in the shape of a bill delivered to the husband, for the attendance and medicines which were found necessary for what is called "the cure" of this nearly fatal disease, a refutation of the whole story sufficiently clear to satisfy any unprejudiced mind. This document is in the hand-writing of Matcham, and specifies two mixtures, a bottle of drops, a *lini*, pills, and a powder, as having been supplied on three days, the 17th, 19th, and 21st of June. No other item is charged for till the 17th of August, when the last act of the tragedy began. Can any further demonstration be wanted of the fabrication of this fiction, which so deluded the judge, and misled the jury?

At the seventh month, somewhat similar symptoms appear, and are interpreted as the commencement of labour.

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I may remark, before quitting this part of the subject, that, in the system of diabetic patients, other oxidisable substances, where the products of the decomposition are readily discovered, appear to undergo decomposition: for example, acetate and tartrate of potash are resolved into carbonate of the base; and salicine, when administered, can be discovered in the urine as saliculous acid—an effect due to oxidation. For this last fact, I am indebted to Dr. Ranke.

Within the last few years, most important facts have been brought forward, throwing considerable light upon the nature of the glycogenic function of the animal body—facts which must necessarily tend, ere long, to give us more correct views of the nature of diabetes. It is chiefly to M. Claude Bernard that we owe these important additions to our knowledge. It had generally been contended, in spite of many and trustworthy statements to the contrary, that the whole of the sugar found in the animal body, both in health and disease, was derivable from saccharine or amylaceous principles; and that no sugar could be produced from albuminous, gelatinous, or other nitrogenised matters. This, however, has now been demonstrated to be erroneous. M. Bernard has shown that all animals, including man, possess the power of forming sugar; that this function is located in the *liver;* and that, as the other organs of the body are impregnated with the products of their secretions, so the liver of the healthy animal always contains this principle, which can be easily extracted therefrom. He has likewise shown that, in health, it is *only* from this organ that it can be obtained. To prove this, we have merely to take a portion of hepatic tissue in a fresh state; bruise it thoroughly in water; boil, in order to coagulate the albuminous matters, and afterwards filter. The liquid portion gives unequivocal evidence of the existence of sugar, by the potash and copper tests before spoken of; and, when fermented with yeast, yields carbonic acid and alcohol. From a portion of a bullock's liver weighing 82,150 grains, M. Bernard obtained, in one experiment, a quantity of sugar corresponding to 651 grains in the entire organ, or 1·79-100 of the weight of the liver. He has also examined the livers of several men who had been executed, or had died suddenly from accident; and in all cases found this organ rich in sugar, the percentage varying from 1·10 to 2·14. The investigations on this important subject have been extended over almost every class of animals; and sugar has been found in the livers of members of the articulata, mollusca, crustacea, fishes (cartilaginous and osseous), chelonian, saurian, ophidian, and batraehian reptiles; in various birds, and in a great number of mammiferous animals. Some differences are discovered in the relative amounts of sugar yielded by the livers of different animals, and in the cold blooded it is less than in birds and mammalia. These experiments have now been repeated by many observers, and it appears placed beyond doubt that the livers of animals killed when in a healthy state are rich in saccharine matter: at the same time, the other organs are destitute of this principle. It will be observed that the food of the animals whose livers have been subjected to this analysis is of very varied character; in some, the diet is purely vegetable; in others, entirely animal; and, in a third class, of mixed nature; yet sugar has been found alike in all, and in an equally large amount in carnivora and in herbivora. To prove that the sugar is not obtained from any saccharine or amylaceous matters in the food, but is simply derived from nitrogenised principles, M. Bernard has fed dogs for six and eight months exclusively with meat, and still found the same proportion in the liver. The experiment has likewise been repeated on owls fed for three months on bullock's heart, and with the same result. To demonstrate even more conclusively that the sugar is formed in the liver, M. Bernard has made the following experiment. He has kept a dog without food for thirty-six hours, and afterwards fed it copiously with cooked sheep's head. After three hours, when in full digestion, the animal has been killed by pithing, and the blood collected both from the venæ portæ and also from the hepatic veins; that from the vena portæ, or before entering the liver, has given no trace of sugar by any of the tests; but the blood from the hepatic veins gave an abundant precipitate with the copper test, and also fermented on the addition of yeast. To make the experiment, if possible, still more conclusive, the meat with which the animal had been fed was examined, and proved not to yield a trace of sugar.

M. Bernard has proceeded a step further, and has shown that, within the liver itself, after removal from the body, sugar is capable of being formed. To demonstrate this, he has carefully removed the organ from a full grown, vigorous, and healthy dog, which had been killed about seven hours after a full repast of tripe, by pithing the medulla oblongata; he then, before the blood had coagulated, passed a continuous stream of water through the liver, by attaching a gutta percha tube to the vena portæ, and connecting it with a tap. After the blood had been washed out, and the water escaping from the hepatic veins colourless and free from albumen, the washing was continued for a short time. It was found that the strongly coloured water which flowed from the hepatic veins at the commencement of the experiment was saccharine, but that, when the colour disappeared, sugar could no longer be discovered in the fluid. The tissue of the liver was afterwards examined by the method I have before mentioned, and a complete absence of sugar proved by the negative results given by the copper and fermentation tests. However, on leaving the liver for twenty-four hours, distinct evidence of this principle was obtained. The sugar thus found could only have resulted from its formation within the twenty-four hours from some of the insoluble matters left in the organ after the first washing. This experiment, therefore, proves, if proof be wanting, that sugar can result from albuminous or other principles present in the liver. M. Bernard has found that, after a short time, no further saccharine formation goes on, but the ordinary decomposition ensues. It has been ascertained that a high temperature completely checks this formation of sugar. If, for example, a washed liver be divided into two equal portions, and one half exposed to the air, without any preparation, but the other half boiled, and afterwards exposed for a few hours, sugar will be found in the first half, but no trace in the second. It appears, from these researches, that one most important function of the liver is to secrete sugar from portal blood, and this *irrespective* of the nature of the food, and for a time even altogether independent of it. This function of the liver appears to be totally distinct from its bile-secreting office, and, as has been observed in some of the lower animals, not to be isochronous with it. The knowledge of the glycogenic function of the liver enables us to explain much which was before obscure in the physiology of respiration: how, for example, one and the same material—namely, sugar—destined for the supply of this process, is provided for in animals of every species, and with every variety of aliment. This discovery has also taught physiologists that there may be internal as well as external secretions; that is, secretions where the products, in place of being eliminated from the body, are thrown directly into the circulating fluid; the liver throwing *bile outwards* (a fluid containing no saccharine matter), and *sugar into* the blood itself. May not this fact give some clue to the function of certain organs, as the spleen, suprarenal capsules, thymus, etc.—glands destitute of excreting ducts? In order that the liver should secrete sugar, certain conditions are necessary; remove these, and the glycogenic function ceases. For example, if the pneumogastric nerves are cut in a rabbit or any other animal, and life is preserved for some hours, no sugar is afterwards found in the liver, because the glycogenic function of the liver ceases when the nervous influence is cut off, and that which previously existed in the organ is removed and destroyed by the changes constantly in operation. This even happens when the animal is freely digesting amylaceous matters at the time of the operation. Our knowledge of this fact enables us to explain why, in acute and severe diseases, the urine of a diabetic patient often becomes less saccharine, or even free from sugar; and why, also, the principle is not ordinarily found in the liver, except death has occurred suddenly, even when the patient was previously diabetic.

M. Bernard was led, by a train of reasoning which has since proved to have been erroneous, to discover a remarkable fact, one which has excited much attention among physiologists: I allude to the artificial production of saccharine urine by the irritation of the floor of the fourth ventricle. The experiment is thus performed. A healthy animal, either a rabbit or dog, is chosen, and the urine shown to be free from sugar by the different tests for this substance; a small instrument is then introduced through the walls of the posterior part of the cranium, in such a manner that the floor of the fourth ventricle can be reached; and this portion of the nervous structure is irritated by means of a fine point, and in such a manner as only to injure the upper stratum of fibres of the medulla oblongata, which constitute the floor of this ventricle. After a short time, usually from half an hour to an hour, if the operation has been successfully performed, the urine becomes sac-

charine to such an extent that sugar can be readily discovered by all the tests. This abnormal condition remains for several hours, sometimes for a whole day; at the same time, the quantity of the renal secretion is not unfrequently augmented. It was at first thought that the appearance of sugar in the urine in such experiments was due to the irritation being directly propagated by the pneumogastric nerves to the liver, but this has since been found not to be so; and these nerves, in respect to the glycogenic function, act simply as incident nerves; and, when divided in the neck, saccharine urine can be produced, not by irritation of their peripheral extremities, but by causing the influence of the irritation to be propagated to the medulla from their central extremities, and thus to the liver through the medium of the spinal cord and splanchnic nerves.

Before quitting the subject of M. Bernard's important investigations, it is necessary to state, as pertaining most closely to our subject, that no greater amount of sugar was found in the liver of animals fed on amylaceous substances, than when an exclusively meat diet was employed. He deduces from this, that no more sugar then enters the hepatic blood. I do not think this is necessarily a true deduction. We must remember that the animals upon which the experiments were made were in a state of health; in disease, the results might be different. M. Bernard thinks that the amylaceous and saccharine matters are converted by the liver into oleaginous substances, and in support of this opinion brings forward many facts.

Reviews and Notices.

The Journal of Psychological Medicine and Mental Pathology. Edited by Forbes Winslow, M.D., D.C.L. April: 1857.

This is a capital number of this interesting quarterly. The great work of M. Morel, on the *Degeneracy of the Human Race*, is reviewed at length by the editor, in an article which gives an admirable view of the author's ideas on this very important subject. We think ourselves that M. Morel cannot substantiate his position that there are now more numerous agents which act as degenerators of the race than at any previous period: in fact, we think that an extended view of the subject points in the opposite direction. Nevertheless, his work furnishes an immense amount of matter which will startle the psychologist.

Dr. Webster's papers on Foreign Pauper Lunatic Asylums have culminated this quarter in a most interesting account of the great Pauper Lunatic Colony of Gheel. It appears to us that the publication of this paper will do much toward silently revolutionising our present system of detaining pauper lunatics in large asylums, conducted on principles analogous to those only to be found in our workhouses and prisons. At Gheel, 800 pauper lunatics are distributed among the 8,000 inhabitants of this district of the Low Countries—not in a few large buildings, but dispersed in twos and threes among the different households. The domestic system of treatment is here carried out to its full extent. The lunatic, instead of forming one of a herd shut up in wards and confined in dismal airing courts, partakes freely of the *family life* of the people; restraint in the form of walls, and locks, and bolts, and a separation of the sexes, are unknown: nevertheless, the average number of cures is higher than in the expensively built asylums of England. Every medical man interested in the treatment of the insane should make a point of reading this most interesting paper.

A very instructive Report on American Institutions for the Insane is extracted from the *American Journal of the Medical Sciences*. The other articles which make up this journal are, the Physiology and Psychological Phenomena of Dreams and Apparitions; the Psychology of Spinoza; on Civilization and Insanity, by Dr. F. Parigot, late Inspecting Physician to Gheel—an admirable paper; Physiological Psychology; on Marriages of Consanguinity; Pathology of Insanity. We have not seen so good a number of this quarterly as the present one for a long time.

Illustrations of the Pathology of Cancer. By John Zachariah Laurence, F.R.C.S., Surgeon to the Northern Dispensary. pp. 59. London: T. Richards. 1856.

This little work is a reprint of some papers which originally appeared last year in the Association Medical Journal. Of the able manner in which the author has discharged the difficult task undertaken by him, our readers have already had ample opportunity of judging. It therefore only remains for us to notice the fact of the publication of Mr. Laurence's papers in their present form, and to recommend the book as a highly valuable contribution towards the elucidation of that obscure and difficult subject—the pathology of cancer. Great praise and hearty thanks are due to Mr. Laurence for his labours.

British Medical Journal.

SATURDAY, APRIL 25th, 1857.

THE RECENT TRIAL OF ALFRED MATCHAM FOR MANSLAUGHTER.

In our number for last week, we commented at some length upon a few points arising out of the trial of Alfred Matcham for manslaughter, reserving others for future consideration. In the mean time, however, we have had access to sources of information not previously available, and have thus been enabled to correct some of our conclusions, and to lay before the public an amplified and more accurate version of some matters which have hitherto been imperfectly detailed.

The facts of this case resolve themselves into three groups: those which relate to the medical history of the case; those connected with the trial; and those which are known as to the career and character of the man.

The medical history of the case, owing to the want of requisite knowledge of such matters on the part of the counsel for the prosecution, was very meagrely elicited at the trial. In brief, it amounts to this. A young and well formed woman, who had borne four children, again became pregnant. At the fifth month, about the middle of last June, some indisposition came on, which, in the defendant's voluntary statement, was represented as inflammation of the kidneys, of such a character that her recovery was thought impossible. Now, it must be remarked, that this assertion was only brought forward at the inquest after the result of the *post mortem* examination was known to Matcham, and that at the trial the husband had no recollection of any such alarming illness.

It so happens, however, that we have before us, in the shape of a bill delivered to the husband, for the attendance and medicines which were found necessary for what is called "the cure" of this nearly fatal disease, a refutation of the whole story sufficiently clear to satisfy any unprejudiced mind. This document is in the hand-writing of Matcham, and specifies two mixtures, a bottle of drops, a *lini*, pills, and a powder, as having been supplied on three days, the 17th, 19th, and 21st of June. No other item is charged for till the 17th of August, when the last act of the tragedy began. Can any further demonstration be wanted of the fabrication of this fiction, which so deluded the judge, and misled the jury?

At the seventh month, somewhat similar symptoms appear, and are interpreted as the commencement of labour.

From the midnight of Wednesday till two o'clock on Friday afternoon, the defendant is in almost constant attendance, and frequently uses so much violent interference as to cause exclamations indicative of great suffering. Instrumental force is then applied at intervals for three hours, and the child is born. At the end of a week, the patient dies, having had the usual train of symptoms following severe injuries. The *post mortem* examination discloses a condition of the vagina and pelvic structures, which was very inadequately described by Mr. Worthington. Dr. Webb's notes ought to have been produced on evidence. Therein we find a very different representation. The perinæum is stated to be torn through nearly its whole length, the wound extending along the right labium. We quote from those notes the following passage:—

"A large and deep wound, beginning about two inches within the vagina on its posterior surface, reached down to the right labium, and there joined the laceration continued into it from the perinæum, making together a wound about six inches in length. It penetrated into the tissues on the right side of the rectum, and completely divided the walls of the vagina. There was also a smaller wound on the left side of the vagina, about three-quarters of an inch long, through the mucous membrane only at its upper end, but becoming deeper inferiorly so as to give the appearance of a puncture."

Other parts of the vagina, the rectum, and the bladder, all showed indications of having been more or less roughly contused. Indeed, the evidence now before us quite makes manifest the cause of death, which last week we thought was "not conclusively established".

The anomalies in the legal proceedings, we find upon investigation, all admit of easy explanation. The false inferences on the part of the judge were, that the proceedings originated in professional jealousy; that Matcham, though having no British qualification to practise, was really the possessor of a New York diploma; and that the medical witnesses endeavoured to establish positions which were untenable. So far as regards Mr. Worthington, it seems, as we have already stated, to be evident enough that he has no cause for jealousy. His reputation, and five-and-thirty years career of successful practice, make him quite indifferent to any one whose business consists principally of five-shilling midwifery. Dr. Webb has for some years declined seeing any patients, and is only an occasional resident in Lowestoft during the vacations. He is therefore far beyond the reach of the Chief Baron's remarks, and may fairly retort upon his lordship the charge of prejudice.

The question of Matcham's qualification may be thus dismissed. He says he has a diploma from a college in New York. We might legitimately ask, Where is it, and why was it not produced? But, in addition to the absence of any positive evidence of its existence, we may rely for disproof on the man's own admission at the inquest, in answer to a question from one of the jury, that he had never been in America, had never been out of England, and was presented with a diploma by some individual who examined him in London. Moreover, in the printed bill-heads, of which he makes such reputable use, he styles himself—"Alfred Matcham, Surgeon Accou*cher*, member of the reformed College of Physicians". Would any one, except a special pleader determined not to recognise adverse facts, require more to be said?

Nor is there any better foundation for the charge of want of courtesy and consideration for an accused man. Notice of the proceedings was given to Matcham by the churchwarden; and he was represented at the *post mortem* examination by Dr. Webb, who was sent expressly to watch the operation on his behalf. This fact has, since the trial, been made public by a declaration unanimously signed by the coroner's jury. Matcham paid no regard to the churchwarden's communication, and abstained from seeing Dr. Webb, as he might have done, if he had thought fit to seek access to him. Whatever the Chief Baron may say, it certainly was not Dr. Webb's place to run about after a man who chose to absent himself.

As to the medical evidence, it was, as usual, very much garbled in the published reports. At any rate, a sufficient cause of death was made out; though this matter was almost ignored by the judge in his charge. It is true that no account was given of the brain, spinal cord, heart, lungs, or other viscera; and so far, the case against the prisoner was weak. But we have already exposed the apocryphal story and false reasoning about the kidneys.

Of the man's history, little need be said. Matcham made his first appearance in the east of England, in connexion with a notorious case of imposture, at a small village called Spottisham, near Ipswich. A young woman, whose impudent pretensions to excessive holiness and the power of total abstinence from food were assisted by the cooperation of this man for a time, duped a certain number of weak-minded people, and created some local sensation. Proper investigation soon exposed the duplicity of saint and accomplice, and caused the departure of the man from the neighbourhood, where he had begun his disreputable proceedings. We next trace him to Lowestoft. There, by joining himself to the lower class of dissenters, raving at public meetings about the poor man's rights and the rich man's oppression, giving indecent lectures in a chapel with closed doors to women, of whom he takes sixpence for the equivocal privilege of admission, and charging a mere trifle for his services in labours and sickness, he manages to secure a kind of notoriety and practice which may easily be understood by our readers, but which has been greatly exaggerated as to its extent.

That the Chief Baron, whom we must presume has seen something of most phases of life and character, should have been so imposed upon by specious appearances as to bring himself into the belief that the unfortunate man before him was a scientific martyr, will remain upon record either as one of the psychological enigmas which so often show themselves in the study of the forensic mind, or else as a singular instance of the perverse tyranny of old habits, leading him to forget his judicial character in the indulgence of the more exciting duties of the advocate.

THE WEEK.

The *Moniteur* of Wednesday publishes a list of English Military and Naval Officers who have been, on the proposal of the Minister of Foreign Affairs, promoted to the Imperial Order of the Legion of Honour. Among those gentlemen selected for this foreign decoration, we find the names of the following army surgeons, who have been made knights of the order:—Surgeon-Major Arthur Anderson, M.D.; Surgeon-Major John Ramsay Brush, M.D.; Assistant-Surgeon John Wyatt, Cold-

stream; Surgeon-Major John Ashton Bostock, M.D., Scots Fusilier Guards; Surgeon-Major R. F. Valpy de Lisle, 4th Regiment; Surgeon-Major A. P. Lockwood, late 7th Regiment; Surgeon-Major Thomas Longmore, 19th Regiment; Surgeon-Major D. R. Mackinnon, 21st Regiment; Surgeon-Major B. G. Barlow, M.D., 28th Regiment; Surgeon-Major G. M. Muir, M.D., 33rd Regiment; Surgeon-Major John Fraser, M.D.; Surgeon-Major J. B. St. Croix Crosse, 11th Hussars. The following Naval Medical Officers have also been decorated: Dr. David Deas, Chief-Surgeon of the Fleet, who is made an officer of the order; and Dr. James Carmichael, Dr. Richard Denton Mason, Surgeon William V. E. Reynolds, and Surgeon Ahmuty Irwin, who have been constituted knights. These names must have been selected by the War Office authorities, and then transmitted to the French minister. We make this remark for the purpose of showing that our naval and military surgeons have done well in the eyes of both home and foreign authorities. We may be permitted to ask, however, how it is that so many names can be found worthy to receive a foreign order, whilst not one was selected as worthy to receive the new and greatly prized Victoria Cross? We shall be told, we know, that the latter decoration was instituted to reward bravery in the field, and that many names worthy of receiving the order of the Legion of Honour are not eligible for the Cross. But it is well known that several medical men distinguished themselves either in the trenches or in the "open" before the Redan in bringing in medical officers and men upon their backs amid a shower of balls. It is well known also that the Duke of Cambridge owed his life to an assistant-surgeon on the bloody day of Inkermann. Are not such acts worthy of the Victoria Cross —the reward "for valour"? Our professional brethren have been without doubt slighted in the distribution of the latter order, and the offence will not be obliterated by the liberality with which they have been selected for the minor decoration.

He Majesty has created her Physician-Accoucheur a Baronet. The whole profession must recognise this is a due compliment to the physician who has been in attendance during the birth of so many scions of the Royal House. It appears that Her Majesty was taken so suddenly with the pains of labour that a common hack cab had to be despatched for Dr. Locock, who probably comforted himself, while driving along in this crazy vehicle, on the crowning honours which awaited him.

The Metropolitan Board of Works have done one good thing at last; they have approved of the Report of their Committee, which recommends, among other important river-side improvements, the embankment of the Thames from Westminster Bridge to London Bridge, on the Middlesex side of the river; and from Lambeth to London Bridge on the Surrey side of the river. In a sanitary point of view, we look upon this recommendation as one of the highest importance, involving as it does the health of the large population which dwells upon the banks of the Thames within this space. It is well known that, in the summer months, fevers and agues are constantly attacking the river-side population, in consequence of the exposure at low water, to the burning sun, of the large expanse of mud saturated with sewage refuse. A particular form of croup has also been noticed lately to be produced principally by the fœtid exhalations arising from these pestilential shores. The covering up with solid masonry of these long strips of land will, we trust, effectually banish these sources of disease from this portion of the metropolis, at the same time that our metropolitan river is adorned by an architectural magnificence of which it is indeed worthy.

In the Journal of April 4th, we inserted a letter from Mr. L. O. Fox of Broughton, containing an account of the proceedings that had taken place in regard to his resignation of an Union appointment, and the acceptance of the vacated office by Mr. Francis Taylor of Rumsey. The dispute between these gentlemen having been brought before the Southampton Medical Society, a resolution was at first agreed on, condemnatory of Mr. Taylor's conduct; but it was withdrawn, being supposed to be libellous. Mr. Taylor also appears to have made a communication to the Society, in explanation of his conduct; part only of which he allowed to be made public. It is reasonably enough conjectured, that the motive restraining him from publicly expressing himself has been the fear of an action for libel on the part of Mr. Fox. To obviate this difficulty, and to give Mr. Taylor the fullest opportunity of explaining his apparently unprofessional conduct, Mr. Fox now generously offers that, if there be anything in Mr. Taylor's explanation prejudicial to Mr. Fox's private or professional character, he will indemnify him from all legal consequences, provided he can offer the slightest evidence of the truth of his assertions. This is a fair offer; and we trust that, for his own sake, Mr. Taylor will accept it.

According to Mr. Gough, the great temperance orator, the Maine Liquor Law is a complete failure in America. "The cause," he writes, "in this country is in a very depressed state. The Maine Law is a dead letter everywhere—more liquor sold than I ever knew before in Massachusetts, and in other States it is about as bad. . . . I see that Neal Dow is to be in England. I am glad; you will all like him; he is a noble man and a faithful worker. He can tell better than any other man the state of the Maine Law movement here, and the cause of the present universal failure of the law to produce the desired result." Mr. Dow, however, demurs to this statement, and thinks this depression is only a "reaction." No doubt; but a reaction which will carry things further the other way than they were before. There are some foolish persons in this country who have established an anti-tobacco-smoking league, and who seek to put the practice down by the strong arm of the law. To all such persons who wish thus foolishly to intermeddle with the habits of the population, we recommend Mr. Gough's declaration as to the results of the movement in America.

Our cousins in New York have an exceedingly free and easy style in most things, and especially in writing. The *New York Herald*, for instance, has discovered that the natives of the Marquesas Islands are in the habit of wedding the fairest damsels they can find, for the purpose of eating them up! Instead of descanting upon the enormity of such a practice among a people well supplied with missionaries, the editor takes a sanitary view of the matter, which would be curious enough were it not for its bad taste. He says:

"Our gallant correspondent is indignant at this sad misuse of so much loveliness, especially as the native pork and game are good of their kind, and so plentiful as to make it obvious that no man need pick his wife's ribs or cut steaks from her person from necessity. We need not say that we concur with our countryman in this view, not only on humane, but on hygienic grounds. Every medical man will vouch that the flesh of female mammalia is less wholesome than that of males. We fear the people of the Marquesas must be injuring their health by their unwholesome diet."

The ladies of the Marquesas must feel obliged for this solicitude, not for the integrity of their own persons, but for the proper nourishment of their carnivorous spouses.

Association Intelligence.

CHANGE OF ADDRESS OF THE EDITOR.

ALL letters or communications for the JOURNAL should in future be addressed to Dr. WYNTER, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the JOURNAL, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
BATH AND BRISTOL. [Ordinary Meeting.]	York House, Bath.	Wed., April 29, 6½ P.M.
SOUTH MIDLAND. [Annual Meeting.]	George Hotel, Northampton.	Thurs., May 21, 2 P.M.

ADMISSION OF MEMBERS, AND PAYMENT OF SUBSCRIPTIONS.

THE General Secretary of the British Medical Association begs to call the attention of members to the Laws regarding the ADMISSION of MEMBERS, and the PAYMENT of their SUBSCRIPTIONS.

"*Admission of Members.* Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch."

"*Subscriptions.* The subscription to the Association shall be One Guinea annually; and each member, on paying his subscription, shall be entitled to receive the publications of the Association of the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary on or before the 25th of December previous."

Either of the following modes of payment may be adopted:—

1. Payment by Post Office Order to the Treasurer (Sir C. Hastings, M.D., Worcester), or to the undersigned.

2. Payment to the Secretary of the Branch to which the member belongs.

3. Members residing in the Metropolis and vicinity can make their payments through the publisher of the BRITISH MEDICAL JOURNAL, Mr. Thomas John Honeyman, 37, Great Queen Street, Lincoln's Inn Fields, W. C.

PHILIP H. WILLIAMS, *General Secretary.*

Worcester, March 1856.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

AN ordinary meeting of the Birmingham and Midland Counties Branch was held on Thursday, April 9th, at the Hen and Chickens Hotel, Birmingham; S. J. JEAFFRESON, F.R.C.P., President, in the Chair.

There were also present: H. Adkins, Esq. (Meriden); A. Allcock, Esq. (Smethwick); E. Bartleet, Esq. (Birmingham); J. Bassett, Esq. (Birmingham); E. H. Coleman, Esq. (Wolverhampton); J. Davis, Esq. (Dudley Port); Bell Fletcher, M.D. (Birmingham); John Fraser, M.D. (Wolverhampton); W. Hinds, M.D. (Birmingham); G. Jones, Esq. (Birmingham); J. W. Keyworth, M.D. (Birmingham); G. H. Marshall, Esq. (Birmingham); J. R. Nicholson, M.D. (Redditch); Oliver Pemberton, Esq. (Birmingham); James Russell, M.D. (Birmingham); J. V. Solomon, Esq. (Birmingham); W. F. Wade, M.D. (Birmingham); J. Wickenden, Esq. (Birmingham); T. Watkin Williams, Esq. (Birmingham); C. Yarwood, Esq. (Ashton Manor); G. Yates, Esq. (Birmingham).

SUBSCRIPTIONS PAID.

Mr. SOLOMON (one of the Secretaries) reported, in accordance with a resolution of the Council of the Branch, that the following members had paid their subscriptions to the Secretaries during January, February, and March:—H. Adkins, Esq. (Meriden); A. Allcock, Esq. (Smethwick); A. Baker, Esq. (Birmingham); R. L. Baker, Esq. (Bordesley); E. Bartleet, Esq. (Birmingham); J. Bassett, Esq. (Birmingham); J. Davis, Esq. (Dudley Port); W. Downes, Esq. (Birmingham); Dr. Fraser (10th Hussars); J. J. Hadley, Esq. (Birmingham); J. L. Hobbes, Esq. (Belbroughton); James Johnston, M.B. (Birmingham); J. Johnstone, M.D. (Birmingham); J. H. Kimbell, Esq. (Knowle); W. Kimbell, Esq. (Tamworth); W. J. Kite, Esq. (West Bromwich); T. Moyles, Esq. (Birmingham); J. R. Nicholson, M.D. (Redditch); O. Pemberton, Esq. (Birmingham); J. V. Solomon, Esq. (Birmingham); W. F. Wade, M.D. (Birmingham); H. Walker, M.D. (Brierly Hill); C. Warden, M.D. (Birmingham); T. W. Williams, Esq. (Birmingham); G. Yates, Esq. (Birmingham).

CASE OF LUPUS: WITH PHOTOGRAPHIC ILLUSTRATIONS.

BY J. R. NICHOLSON, M.D.

This paper related a case of simple lupus, which had resisted treatment for twenty-two years, and now succumbed to apparently simple remedies. The disease occurred in a female, and commenced at the age of eight years: when first seen, in November last, it occupied almost the whole of the face. After describing the appearance the patient presented, the paper went on to state that the treatment mainly consisted in the local application of ointment of iodide of sulphur, with the internal use of, primarily, cod-liver oil, and subsequently glycerine with iodide of iron. It was further remarked, that the preparations of iodine and sulphur, as well as the analogous compounds of iodine and mercury, did not receive the same amount of attention, as local applications in the tubercular forms of skin-disease, in this country as on the continent. The paper was illustrated by photographic portraits of the patient in the different stages of the cure; and it was remarked, what valuable results might be expected from the introduction of photography officially into our hospitals, especially as a means of instruction and reference, while the expense and labour would be merely trifling.

THE NATURE AND ORIGIN OF RENAL DISEASE.

BY J. RUSSELL, M.D.

[This paper will be published in the JOURNAL.]

Mr. BARTLEET expressed an opinion as to the extreme importance of ascertaining the influence exercised by the nervous system on renal diseases; and stated that, at present, his own conviction was, that all the pathological changes in the kidney could be referred to the blood.

Dr. HINDS, in remarking upon the fact that Dr. Russell evidently thought that inflammatory action played a secondary part in the origin of Bright's disease, said that his own experience led him to think that some cases of chronic renal disease had their origin in acute inflammation.

Dr. WADE agreed with the author (who had given a most lucid exposition of Dr. Johnson's views), that a humoral pathology was making way with the medical public. It was probable that the blood-poison theory, if true of the kidney, would also be found applicable to the diseases of other secreting organs: hence the vast importance of not too readily accepting as fact that which is, at present, nothing more than a theory based on an hypothesis. Dr. Wade had no doubt that the blood played an important *rôle* in renal disease, but whether by over-stimulating the organ in the manner imagined by Dr. Johnson, or by affecting the nutrition of the active secreting agents, viz., the epithelial cells, in consequence of an abnormal condition of its albuminous element, we are not yet in a position to decide. Dr. Wade thought that the latter view had not received the attention it merited, for that as much evidence could be produced in its favour as in support of the eliminant or blood-poison theory.

Dr. KEYWORTH considered that it was asking too much of pathologists to explain how the poisoning of the blood operated on the condition of the epithelial cells. It was impossible to explain all diseases of the kidney by poisoning of the blood.

The PRESIDENT made some observations relative to the condition of the blood preceding changes in the kidney. Statistical facts should be referred to, in order to show whether renal diseases prevailed in large towns, where cachexia was so abundant.

Dr. RUSSELL, in reply, said that it was impossible, in the limits of a paper like the present, to attempt to touch upon all the recent doctrines in relation to renal diseases. It was his opinion that we were not yet masters of "blood-poisoning and its effects". We could not yet say as to the exact way in which poisons were translated from blood to cells. We were, in fact, ignorant of cell-life, and were unable to trace its existence; neither could we say what constituent of the blood was translated. He by no means asserted that all renal diseases

were due to poison in the blood. Dr. Russell then referred to the extra work which the kidneys are called on to perform in certain acute diseases: and hence the importance of relieving this by acting as quickly as possible on the skin and bowels, and so diminishing the functional activity of the organs.

CASES IN WHICH A DISORGANISED EYEBALL WAS EXCISED FOR THE RELIEF OF AMAUROSIS OF THE COMPANION EYE.

BY J. V. SOLOMON, ESQ.

Mr. Oliver Pemberton observed, that the cases narrated by Mr. Solomon had too much the tendency to underrate the severity of an operation like that of extirpation of the eyeball. It was an operation, in his opinion, which should not be performed, as a general rule, except as a means of relieving malignant or ulcerative irritation in a disorganised eyeball; and it certainly did not appear to him to be established that the cases so treated by Mr. Solomon would not have had their amaurotic condition relieved by other remedies. The question was, however, one of great importance; and the cases required to be most attentively considered before a decided opinion was given on the form of treatment that should be adopted in such cases.

Mr. Marshall stated that, having assisted at the operation, and witnessed the subsequent progress in three of the cases brought forward by Mr. Solomon, he bore willing testimony to the great benefit resulting in those cases. The operation of extirpation, for the relief of the sympathising eye, must, however, he contended, be accounted a severe measure, and, under all circumstances, called for the exercise of calm judgment and some degree of self-restraint on the part of the surgeon before resorting to it. Mr. Marshall was aware there existed a difference of opinion as to the propriety of the operation, but believed that some of the most eminent ophthalmic surgeons of the present day practised successfully the plan of treatment advocated by Mr. Solomon. He still, however, considered the matter *sub judice*, and did not doubt that, ere long, a sufficient store of facts would be accumulated to enable the profession to arrive at a just conclusion.

Mr. Solomon, in reply, said that he was most firmly convinced of the value of the treatment he advocated. He did not agree with Mr. Pemberton in his view of the dangers attendant on the operation of extirpation, as performed by him. It was a very different operation from the old one, where all the contents of the orbit were removed. He was satisfied that the nature of the cases most fully bore out the propriety and value of the treatment; and he could only regret that he had been unable to bring them before the meeting in a more elaborate form.

Editor's Letter Box.

PRETUBERCULAR STAGE OF PHTHISIS.

Letter from W. O. Markham, M.D.

Sir,—You will, I know, permit me a rejoinder to Dr. E. Smith's letter; for the matter which he disputes with me involves something more than a mere personal interchange of epistolary amenities. A scientific question of direct practical interest is here concerned, which in the present condition of our knowledge will, I venture to think, be none the worse for a little further ventilation in your Journal.

Dr. E. Smith objects to certain views respecting (so-called) pretubercular stages of phthisis, which I upheld at the Pathological Society. He very properly remarks that, as I made an assertion, it is my business to prove it. I quite agree with him in this; but, in doing so, I must remind him that, after the same just measurement, he likewise is bound to prove the correctness of his own—an opposite—thesis.

Now, I certainly believed that I had proved and demonstrated my position—*les pièces à la main;* and regret to find that I expressed myself so mazily, as to have subjected myself to the odium of being thought a medical theorist; of having given utterance to that thinnest, and flimsiest, and most readily woven of all imagination-textures (the very bugbear of true progress in medicine), a medical theory.

Let me once again state the case. Writers (and not merely Dr. E. Smith) speak of a pretubercular stage of phthisis, that is, of an abnormal condition of the lungs and of the body, which precedes the deposition of tubercular matter in them, but which is nevertheless a stage of phthisis. Now this I venture to call the language of hypothesis; and for the following reasons. How do those writers in such cases prove the non-existence of tubercular matter? Evidently they can only do so by forming their judgment on the absence of those physical signs which indicate the presence of foreign matters in the lungs. But what is the value of such opinion, if it can be shown that the absence of physical signs is not a proof, irrefragible, of the absence of tubercle in the lungs? A lung which I exhibited at the Pathological Society, in my opinion, demonstrated this fact—long, indeed, admitted by our best auscultators—"that there are no distinct signs, by which we can with certainty diagnose the existence of miliary tubercle; and that solitary tubercles do not of themselves produce the slightest change in the percussion sound of the lungs."

Miliary tubercles were found distributed at distances of about half an inch through every part of both lungs, in the case referred to: and yet, when the lungs of the individual were carefully examined, sixteen hours before death, I found no auscultatory signs whatever, appreciable to my ear, which indicated any deviation of those organs from their healthy condition. If my observation was correct, the fallacy of the pretubercular stage is, I think, hereby demonstrated. But Dr. E. Smith very properly hints—and I was prepared that he or some one else should do so—that my auscultatory organs might have been out of order, and perhaps are not very sensitive; and therefore placed myself under the wings of authority, and I quoted Skoda (as above), and I might have quoted Louis to the same effect.

Let me put the matter in another form. Suppose some accident should bring under the hand of the anatomist a case of well marked, as it is called, pretubercular phthisis; and suppose, according to the theory maintained, that no tubercular matter was found present in the lungs; would the admirers of pretubercular stages still venture to call such case a case of phthisis? would they venture to bring the lungs to the Pathological Society, and to say, this is a case of phthisis, but there is no tubercle in the lungs; here is the condition of things which precede the deposition of tubercle? No! I know they would anticipate the answer awaiting them; viz., that, in the present state of medical knowledge, we know nothing of phthisis apart from the presence of a tangible *materies morbi* in the lungs.

Let me not be misunderstood. That there is a morbid condition of the body existing anterior to the deposition of tubercle is certain; and equally certain that the tubercle is not *the disease*, but only the external and tangible manifestation of that condition; and that treatment is directed, not to the local tubercle, but to the arresting of that anterior morbid condition which precedes the deposit of tubercle: all this is clear enough. What I object to is, the assumption of conditions which are not warranted by direct proof and experiment, and the consequent founding of practice upon vague hypotheses. Dr. E. Smith has thus, as I think, hypothetically assumed a pathological condition, as representing the pretubercular stages of phthisis, and founded a treatment upon the hypothesis. The condition is, "a lessened action of the vesicles of the lung, originating in themselves, or conjoined with an atonic condition of the general nervous system." And the peculiar treatment is, amongst other remedies, teaching the patient to inspire deeply while he is sitting at rest, so as to counteract the hypothetical condition.

But I do Dr. E. Smith injustice. *His* pretubercular stage is not without physical signs. He says that, when he meets "with the slightest dull (sub clavicular) percussion-sound, with lessened vesicular murmur, less forcible and deep inspiration, and flattening of the apex of the lung", he considers he has met with the first condition of phthisis—the stage anterior to the deposit of tubercle. Now, surely, in the present state of pathology, we have a much better right to believe that such a condition indicates the actual deposit of tubercle in the lung. I think we shall continue to do so, unless Dr. E. Smith gives some better proof of his position.

Dr. E. Smith admits, however, that the dull percussion is in such case very slight, and suggests that few people are gifted with that exquisite sense of hearing which is requisite to render them percipients of the morbid auscultatory sounds in question. If so, then it appears that the stethoscope, like the religion of Isis, is to become the property of a few high cultivators of the auscultatory art, in some of its most important indications. To this I cannot subscribe. I believe, indeed, that it would be better for the public that we should abandon the instrument altogether, than submit to the conclusion that only one man in a thousand can use it effectually. I have seen quite enough of stethoscopy to satisfy me that over refining in its practice is fraught with infinite mischief to the patient, and

leads the observer into all sorts of erroneous conclusions and practices. My belief is, that when the auscultatory signs, in any given case, are such as not to present to an ordinarily educated stethoscopic observer clear and distinct indications of deviations from health, they are worth nothing as indications of diseased conditions.

I owe one word of explanation more to Dr. Smith and your readers. Thrice in one column he has made me guilty of uttering an unmeaning absurdity; and he has marked it well by the aid of inverted commas, and so made the most of it. I know not where Dr. E. Smith picked up the words "miliary tubercles widely distributed through the tubes of the lungs". I can assure him I never uttered such wild phraseology, and totally repudiate all connexion with any printer's devil that may have put such words into my mouth. What I did say, Dr. E. Smith may find by referring to my own report, published in your Journal, of the case which he criticises.

Commenting on my record of the case, Dr. Smith judicially observes, "there must be something wrong here". I can assure him that I still prefer the evidence of my own senses to his opinion—however much I value it—as to what *must have been;* and I will now leave it to the profession to decide whether there may not possibly be *something wrong there*—in Dr. Smith's logic—as well as here. I am, etc.,

W. O. Markham.

Clarges Street, April 18, 1857.

THE OPHTHALMOSCOPE.

Letter from Holmes Coote, Esq.

Sir,—The last number of your Journal contains a letter from Mr. Dixon, wherein he says that a statement of mine respecting the ophthalmoscope requires to be corrected. He remarks, that "undoubtedly Mr. Cumming was the first to point out that the fundus of the healthy human eye is not a black, but a coloured reflected surface", and that "this discovery led the way to Helmholtz's invention; but Mr. Cumming himself never constructed or suggested any form of ophthalmoscope."

I believe Mery was the first to notice the bright colour of the bottom of the eye, and the blood-vessels of the retina, in the beginning of the eighteenth century, by accidentally observing the appearances presented in the eye of a cat held under water. Five years after, Lattére pursued the investigation; and, in 1845, an essay on the subject was published by Dr. Kussmaul of Heidelberg. Mr. William Cumming, then, was not the first to point out that the fundus of the healthy human eye is a coloured reflecting surface; but he was, I believe, the first to lay down proper rules for employing light in the investigation of the morbid conditions of the deep-seated structures of the globe. The "merit of discovery" does not belong to those who have constructed complicated or simple instruments, based upon an established principle, but to him who first brought that principle to bear upon matters of practical utility.

I willingly acknowledge that to Helmholtz is due, in 1851, the merit of inventing the complicated apparatus which bears his name. The ophthalmoscope now in use is essentially the same in principle as that shewn to Mr. Wharton Jones by Mr. Babbage, about the year 1847. As Mr. Jones himself observes, "this ophthalmoscope of Mr. Babbage, we shall see, is in principle essentially the same as those of Elkins and Donders, of Coccius and Meyerstein, which themselves are modifications of Helmholtz's."

I beg to refer those interested in the subject to a very able article by Mr. Wharton Jones, in the *British and Foreign Medico-Chirurgical Review*, vol. xiv, 1854.

In my lecture, delivered at St. Bartholomew's Hospital, on the ophthalmoscope, I wished to shew that which I believe is an ungrateful truth; namely, that we are very apt to overlook merit in our own countrymen, while diligently seeking to find it out in foreigners. I am, etc.,

Holmes Coote.

Norfolk Street, Strand, April 20, 1857.

MR. FOX AND MR. TAYLOR.

Letter from L. O. Fox, Esq.

Sir,—I hoped the publication of my last letter in your Journal would have induced Mr. Taylor to make public his defence, or to explain his reasons for declining to do so.

It has been suggested, that fear of legal proceedings may prevent his speaking out. To obviate this difficulty, if it exist, I make the following promise: That, if in the statement communicated privately and confidentially to the President of the Southampton Medical Society by Mr. Taylor, in his own justification, there be anything prejudicial to my private or professional reputation, which, if published, would render him liable to an action for libel (*Does Dr. Oke mean this when he alludes to painful results?*), I hereby promise to indemnify Mr. Francis Taylor from all legal consequences, if he will openly declare the same, provided he can offer the slightest evidence of the truth thereof.

For the last time, I call upon Mr. Taylor, as a member of a noble profession, as a gentleman, and as a man of honour, if he value the opinion of his brethren, to come out in broad daylight, disdaining the dark shadow of the president's chair, and let us read in your bold type what was communicated to Dr. Oke in secret, as Mr. Taylor's defence.

I am, etc., L. Owen Fox.

Broughton, Stockbridge, April 20, 1857.

MEDICAL ETIQUETTE.

Letter from Jukes Styrap, M.D.

Sir,—The Council of the Salopian Medico-Ethical Society, while regretting the necessity for soliciting so large a space in the columns of the Journal, will feel much obliged by insertion being given to the following correspondence on the subject of the Encouragement of Homœopaths by Legitimate Practitioners. I am, etc.,

Jukes Styrap, *Hon. Sec.*

Shrewsbury, 21st April, 1857.

I. *The Secretary of the Salopian Medico-Ethical Society to James Long, Esq.*

"Shrewsbury, 6th April, 1857.

"Sir,—In accordance with my instructions from the Council of the Salopian Medico-Ethical Society, I beg to transmit for your consideration the enclosed copy of a Resolution, unanimously passed at their Half yearly Meeting held on the 26th ultimo, and approved at a subsequent meeting.

"I beg to add, that, should you feel aggrieved at the implied condemnation of your conduct as a medical practitioner in the case alluded to, the Council will be happy to summon a special meeting of their body for the purpose of hearing, and adjudicating upon any additional explanation you may personally wish to offer. "I am, Sir, your obedient servant,

"Jukes Styrap, *Hon. Sec.*

"James Long, Esq., 3, Hardman Street, Liverpool."

Copy of Resolution.

"After an anxious consideration of the case, and a careful perusal of the correspondence between Mr. J. R. Humphreys, Surgeon to the Salop Infirmary, and Mr. James Long, Surgeon to the Liverpool Royal Infirmary, which has recently appeared in the British Medical Journal, relative to an alleged breach of professional etiquette committed by Mr. Long in meeting in consultation a homœopathic practitioner, in the late fatal illness of A. W. Corbet, Esq., of Sundorne Castle, in this county—notwithstanding that Mr. W. J. Clement, a resident surgeon, had previously refused to consult on the case with the said homœopathist—of which fact Mr. Long admits his knowledge,—the Council in expressing their hearty approval of Mr. Clement's conduct throughout the affair, much regret the necessity for recording their deliberate opinion that the explanation offered by Mr. Long is far from satisfactory."

II. *Mr. Long to the Honorary Secretary of the Salopian Medico-Ethical Society.*

"3, Hardman Street, Liverpool, April 7th, 1857.

"Sir,—I beg to acknowledge the receipt of a list of the members on the roll of the Salopian Medico-Ethical Society, and the Resolution which the Council have taken the trouble to pass, and the members to approve of, concerning me; also your note, in which you state, 'that, should you feel aggrieved at the *merited?* (I am not sure of the word) condemnation of your conduct as a medical practitioner in the case alluded to, the Council will be happy to summon a special meeting of their body for the purpose of hearing and adjudicating upon any additional explanation you may personally wish to offer.' I beg most respectfully to decline the above extraordinary proposal.

"I am, Sir, your obedient servant,

"James Long.

"To Jukes Styrap, M.D., Hon. Sec."

III. *The Honorary Secretary's Reply to Mr. Long.*

"Shrewsbury, 11th April, 1857.

"Sir,—In reply to your note—which, though dated the 7th instant, was not received until the 9th,—allow me to request your re-perusal of my former communication, and I think that you will experience little or no difficulty in deciphering the word, specially alluded to, to be '*implied*', and not '*merited*'.

"With regard to 'the extraordinary proposal', as you are pleased to term it, I would beg to remark, that, however much so it may appear to yourself, you will, I believe, on inquiry, find it to be not only in perfect accordance with the laws of medical etiquette, but an acknowledged principle of society at large, whenever a member chooses to deviate from the defined rules of professional, or general etiquette.

"Since, however, you decline to avail yourself of the offer made by the Council of the Salopian Medico-Ethical Society, I am desired by Mr. Humphreys to solicit your attention to section 3, rule 2, p. 13, of the accompanying bye-laws, and to express his willingness to submit the matter in dispute, for adjudication, according to the principle therein laid down, or to any other which may be mutually agreed upon.

"As a slight proof of the Council's anxiety not, in any way, to prejudice you in the eye of the 'medical world', I beg to call your attention to the fact that no public allusion has been made to the following significant extract from a letter addressed (in December last) to myself, as Hon. Secretary, in answer to the Council's inquiry—'Whether you were a member of the Liverpool Medico-Ethical Association?'—in which case, it was intended to prefer a charge against you of a breach of professional etiquette, to be adjudicated upon by the Ethical Society of which you were supposed to be a member.

"I remain, Sir, your obedient servant,

"Jukes Styrap, *Hon. Sec.*

"James Long, Esq."

The following is the extract referred to in the last paragraph of Dr. Styrap's letter.

"*Mr. J. Long of the Liverpool Infirmary was one of the original members of the Medico Ethical Society, but on finding that that body would not admit homœopathists, nor in any way recognise them, he sent in his resignation. It was understood at the time, that this step was taken that he might be at liberty to meet homœopathic practitioners.*"

IV. *Mr. Long's reply to the Hon. Secretary.*

3, Hardman Street, Liverpool, April 14th, 1857 (night).

"Sir,—I beg to acknowledge the receipt of your letter of the 11th inst., and a copy of the rules and bye-laws of the Salopian Medico-Ethical Society. I do not find any law which authorises the council and members to pass resolutions condemnatory of a medical practitioner, not a member of the Society—but I do find the council have a power to censure or expel a member, after such member has received from the secretary seven days notice to attend the meeting, and the nature of the charges to be brought against him. I do find that no member shall practise, professedly or exclusively, homœopathy, hydropathy, or mesmerism, or other than legitimate medicine and surgery. I further find that members are not debarred from meeting duly qualified practitioners (with the reservation, I presume, of bye-laws) until the latter shall have been adjudged by the majority of the members to be practising irregularly. I do not find, by the proceedings of the half-yearly meeting which you transmitted to me, that Dr. Wilkin was a professed or exclusive homœopathist, or that he had been adjudicated to be an irregular practitioner.

"I have already stated that when I telegraphed I would meet George Wilkin, I did not at the time recollect who he was, and that I did not know that he was reputed to be a homœopathist, till I heard from his own lips that a Shrewsbury surgeon had declined to meet him on that ground. I consider the ample statement I have made in the British Medical Journal ought to be sufficient for any Society.

"I have already declined to plead at the bar of the Salopian Medico-Ethical Society. I decline equally to refer the subject of your letters to the 'Court Medical' proposed in your last. The council and members have already stated their decision; and I should expect but little favour from a 'Court Medical' composed of three practitioners, one named by me, the other by Mr. Humphreys, and the third by the council.

"I am surprised at the tone of your allusion to the late Medico-Ethical Society of Liverpool; my reasons for seceding from it were no secret, and they were openly stated at the time, in a letter addressed to the secretary.

"I must now beg to decline any further correspondence with the Salopian Medico-Ethical Society on the subject of your letters.

"I remain, sir, your obedient servant,

"James Long.

"Jukes Styrap, M.D., Hon. Sec. to the Salopian Medico-Ethical Society."

V. *The Hon. Secretary to Mr. Long.*

"Shrewsbury, 20th April, 1857.

"Sir,—I regret the necessity for troubling you, contrary to your wish, with a reply to your last communication, the general tenour of which, I am requested to inform you, leaves the council no alternative but to submit the matter for the judgment of the profession at large, through the medium of the medical journals.

"So far from the council having, as you state, pronounced '*their decision*', you will find, on reference to the 'resolution', that it was a simple expression of opinion, and left the case open for adjudication—a course perfectly legitimate, and in accordance with the spirit of the 'resolution' passed at a recent meeting of your Hospital colleagues. And here I would beg to observe that, however satisfactory your statement in the British Medical Journal may have been to yourself individually, it does not appear to have been more approved by the medical and surgical staff of the Liverpool Royal Infirmary, than by the council of the Salopian Medico-Ethical Society, in confirmation of which, allow me to refer you to the record of their proceedings published in the same Journal, on the 28th of February.

"At the same time, I beg to assure you that the council—composed of men of established local reputation—can well afford to disregard the imputation of partiality, which you have so illiberally sought to cast upon them. In answer, therefore, to your insinuation against the proposed 'Court Medical', I will simply remark that the president of the Manchester Ethical Association would have been solicited to act, on behalf of the Salopian Society, in conjunction with the two medical men nominated by yourself and Mr. Humphreys; and a 'Court', so constituted, ought to satisfy the most fastidious practitioner.

"I remain, sir, your obedient servant,

"Jukes Styrap, *Hon. Sec.*

"James Long, Esq., Liverpool."

CONSULTATION WITH HOMŒOPATHIC PRACTITIONERS.

Letter from James Long, Esq.

Sir,—In consequence of the letters which have appeared in the British Medical Journal, associating my name with Homœopathy, I have been much misrepresented both here and elsewhere, and subjected to annoying insinuations. I have, moreover, received from the secretary of the Salopian Medico-Ethical Society, a condemnatory resolution, passed by the council, and approved of by the members of that society at their half-yearly meeting, with an intimation, that if I felt aggrieved, I might appear in person to plead at the bar of that society. I declined this; and a proposal was made that I should submit to the arbitration of a "Court Medical," composed of three practitioners, one to be named by me, one by Mr. Humphreys, and the third by the council. I need scarcely remark, that I have declined this also.

I do feel aggrieved that, on the 13th of December last, I should have been dragged before the profession, and that on the 11th of April I should receive a proposal to submit to arbitration a matter which I am not singular in thinking, that my statements already published should have set at rest in the mind of any one who was solely seeking after truth. Direct charges may be met; but misrepresentations and insinuations are not so readily dealt with. I therefore now beg, through the medium of your Journal, to state, for the information of those who make such free use of my name, the following remarks, which I hope will satisfy, not only my present traducers, but also those who might otherwise feel disposed to come after them.

When Homœopathy was first introduced into Liverpool, a paper upon that subject was read before the Medical Society by one of its members, a Homœopathist. In conjunction with others, I opposed the new doctrines to the utmost of my knowledge and ability. I adopted the same course when a paper was read, at a subsequent period, by the same gentleman, on the Treatment of Cholera. At this period, the only knowledge I possessed on the subject was derived from the *Organon* of Hahnemann. After the meeting, I was introduced to, and subsequently became acquainted with, an ardent fol-

lower of Hahnemann, who, though he had been educated in the London schools, and had for some time pursued the recognised form of practice, had now established himself in Liverpool as a homœopathic physician, from a full conviction of the truth of these doctrines. The statements I heard from him, from time to time, of the extraordinary cures performed under this new system of treatment, were so much at variance with what my own experience and the slight knowledge I had of the subject led me to expect, that I was determined to investigate the subject for myself; and, at his recommendation, I read carefully several works on the subject, and paid frequent visits to his house for the purpose of discussing the novel doctrines and plans of treatment which had been brought under my notice. On these occasions I not unfrequently met with different practitioners of the town and neighbourhood, and thrice, I believe, I met with Dr. Wilkin. Not being satisfied with what I had heard and read, I had two or three of his gratuitous patients sent to my house, whilst under treatment, that I might satisfy myself on the point of diagnosis; and also, on two or three occasions, I saw a similar class of patients at his house for a similar purpose.

At this period, 1850, it was proposed to form a Medico-Ethical Society in Liverpool, and several meetings were held for the purpose: such a society was formed. Being solicited to join it, and having obtained a copy of the laws, and seeing nothing objectionable in them and much to approve of, I did so, and was placed on the council. I attended a meeting of the council on the 29th of October; and finding that I had misunderstood the spirit of one of the laws, which had been altered from what it was in the original copy which I had seen, and not approving of this change, I withdrew from the society, and in a letter, addressed to the secretary, gave my reasons in full for doing so. The society, which numbered a tolerably fair proportion of the practitioners of the town and neighbourhood, was, very soon afterwards, broken up. I mention this circumstance, as it is alluded to in a letter to me, from the secretary of the Salopian Medico-Ethical Society, who quotes a "significant extract" from the letter of a Liverpool correspondent, addressed to him in reply to certain inquiries in December last.

I have treated surgical patients both at my own house and elsewhere, some of whom were in the habit of taking homœopathic medicines during the treatment. So long as they thought they derived benefit from them, I did not interfere; but when other treatment was required, I prescribed it, and should have given up the case if my wishes had not been complied with. I have on two occasions—the one medical, the other surgical—examined a patient whilst a homœopathist was in the house. I have passed a catheter, in an urgent case of retention of urine, whilst a homœopathist was in attendance. On two occasions, in 1850, I operated for hernia on patients under the charge of a homœopathic surgeon. Before doing so, I stipulated that I should have the entire management of the cases, free from all interference on his part: this was strictly adhered to. I have attended, where a portion of the family were under homœopathic treatment, and a portion under mine, without any interference on either side. I have had patients who, being dissatisfied with homœopathy, have put themselves under my care; the converse has frequently happened. I have been called to patients whom I have ascertained to be under no regular practitioner, but have found or suspected to be under homœopathic treatment: under these circumstances, I have invariably given my opinion, and prescribed, if I thought it necessary, but have not called again unless requested to do so.

There are, however, two cases which, at the time, were made the subject of much remark, and have been pretty well handled since. The first occurred in 1850. I was requested to meet a homœopathist in consultation, and I declined. The friends of the patient, who were averse to that system, urged me to go, for the purpose solely of giving my opinion as to the nature of the case. I went; and in the presence of the gentleman who had charge of the case, stated to the family, that I did not agree with him in his diagnosis, and that the system pursued would not meet its requirements. I was then requested to attend for the purpose of watching its progress. I did so several times, and, in presence of the practitioner and family, repeated my former opinion. On an emergency, a regular practitioner was called in; him I met and consulted with so long as the case required it.

The second occurred in 1851. A gentleman was suddenly struck down by apoplexy, obviously arising from the rupture of some large vessel; there were insensibility, stertor, paralysis of one side and convulsive twitchings of the other. I stated to his wife, that medical treatment could be of no avail; she however believed that homœopathy could do everything. I saw the case twice or three times whilst two homœopathists were in attendance; and, in conjunction with another regular practitioner, made in their presence a *post mortem* examination.

I have now stated, to the best of my recollection, all the cases in which I have been homœopathically concerned; yet in none of those cases was I "associated" with these gentlemen in their treatment. My opinions and mode of acting became so well known, that, since May 1853, when I refused to meet two homœopathists on a point of diagnosis, but had the case afterwards put under my charge, I have not had a single application to meet them, and have had nothing to do with them in any way whatever until the Shrewsbury case, as it is termed, occurred. This case, from the prominence it has acquired, requires some further notice, especially in reference to my dealings with Dr. Wilkin. I met him, as I have already stated, twice or thrice by accident, at the house of my homœopathic friend. In May 1852, I met him at an operation with Mr. A., of Shrewsbury. In June 1853, he called upon me in great haste, in a case, requesting me to see a person whom he believed to be dying. I was on the point of leaving home for a distant visit, per railway. I hurried off with him; found the patient dying; ordered some brandy, and left. During the whole of this period, up to the time when he met me in Shrewsbury, I had no further intercourse with him, professional or otherwise, except the interchange of ordinary street civilities, and these were few and far between. Yet it is stated, that it was well known that, before Dr. Wilkin left Liverpool, he was a homœopathist, and that he was practising in Shrewsbury as such, and that, *therefore*, I must have known it; this is the *pons asinorum*. I affirm I did not, and I am not believed. I had no reason to know it from either of the two cases I have mentioned; nor had I any more reason for believing that he had become a convert to homœopathy, than that I myself, or any of the gentlemen whom I met at my friend's house, had. It is urged, however, that what was generally known, I *must* have known. But I submit, that it is perfectly possible that I may be so engaged with my own pursuits and concerns, as not to busy myself about the affairs of my neighbours, or to pay attention to the current rumours of the day, if indeed I happen to hear them. Will this be believed? that the most eminent surgeon in this town openly stated, that he was in the frequent habit of meeting in consultation, a gentleman who is professedly a homœopathist, who is well known to be one, and who has written a small book on the subject, and that he did not know he held those particular doctrines? I believe it; and no one who knows him would, for a moment, doubt his word.

I have already stated that when I telegraphed to George Wilkin I did not recollect who he was, and that I was not aware he was reputed to be a homœopathist till he informed me himself. In the course that I subsequently pursued, as detailed in my first letter, I still feel that I acted perfectly right. If I had declined to give my aid to the patient unless the medical attendant were first dismissed, or had refused, after repeated telegraphic messages, to pay a second visit, knowing that assistance had been denied by the Shrewsbury practitioners; or had I, when further advice was required, neglected to procure it whence it could be best obtained, I feel I should have been guilty of a moral wrong.

For a period of from two to three years after homœopathy was first introduced into this town, I pursued a strictly philosophical inquiry into its theory and practice. During the last four or five years, though not unobservant of its course, I have personally had nothing whatever to do with it. I think I may, therefore, without claiming to be the teacher of others, state the conclusions which I have, from my own observations, arrived at respecting it. I believe that infinitesimal doses of medicines are wholly inoperative; that some of the medicines given (*e. g.*, silica in specks on the cornea) are absurd. I believe that the system and infinitesimal doses are *negatively* beneficial by preventing the ordinary operations of nature (the *vis medicatrix naturæ*) from being interfered with; that many of the extraordinary cures advanced have been merely coincidences, or the result of a cessation from active medication; and I believe it has proved *positively* beneficial by showing that such form of treatment is but rarely required, and that the efforts of nature, if not interfered with, are adequate to rectify most bodily derangements; in short, it has taught us to place more confidence in nature and less in medicine; and has,

to a certain extent, opened the eyes of the public to the absurdity of swallowing the nostrums which are daily advertised.

I have ascertained, from an eminent chemist, no opponent of homœopathy, that he could detect no arsenic in a large number of arsenical globules he had analysed for the purpose. I have heard, from the most eminent homœopathic practitioner of this town, that homœopathy has nothing to do with quantity; that any amount of medicine short of what would produce its direct physiological action, is homœopathic to the diseased condition requiring it (*e.g.*, any dose of opium short of narcotism when this medicine is indicated). I have come to the conclusion that the homœopathy of to-day is not that of Hahnemann; that whilst legitimate practitioners are gradually relaxing in the heroism of their treatment, and giving smaller doses and less active medicines, homœopathists are increasing the magnitude and strength of theirs, and, in addition, are availing themselves of aids and appliances which might be sought for in vain in the works of Hahnemann; that homœopathy, as it is now practised by well educated men, is not rightly understood, either by the medical profession or the public; and that, whilst their opinions on therapeutics are different from ours, they agree with us in other respects. Indeed, the subject appears not to be clearly understood by the Salopian Medico-Ethical Society; for whilst they censure me for meeting a practitioner who is reputed by them to be a homœopathist, they allow, by their own laws, a member to adopt homœopathy, hydropathy, or mesmerism, so long as he does not do so professedly or exclusively. By bye-law No. 1 it is enacted that "No member shall practise, professedly or exclusively, homœopathy, hydropathy, or mesmerism, or other than legitimate medicine and surgery."

I claim for myself, and concede equally to others, the right to form an independent judgment in these matters; in accordance with that judgment I have not been, nor could I be, associated in the treatment of a case with any one who practises homœopathically.

Lest I should be again misunderstood, or misrepresented, I beg to state that whenever I receive a telegraphic or other message, summoning me to meet a gentleman in consultation, whom I know to be an irregular practitioner, I shall not go. But when I do not know the individual, I shall not consider it as part of my duty to inquire of the secretary of a Medico-Ethical Society, or of any one else, whether the medical gentleman is a homœopathist; and if on my arrival I should find the patient to be under homœopathic, hydropathic, mesmeric, or other irregular treatment, I shall not consider it part of my business to insist on the expulsion of the attendant, before I express an opinion, or perform a surgical operation. I shall not enter into consultation with the practitioner, but shall act as independently as if the patient were under my sole care.

Having now recorded facts as they occurred, and having stated my opinions on the subject generally, I challenge any one to come forward and prove that I have at any time acted in violation of them. I have honestly stated "the truth, the whole truth, and nothing but the truth"; and I trust that, so far as I am individually concerned, I have set the matter at rest, and that for the future my sentiments upon it will not be misunderstood, or my acts misrepresented.

I am, etc.,

James Long.

3, Hardman Street, Liverpool, April 16th, 1857.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

In these lists, an asterisk is prefixed to the names of Members of the Association.

BIRTHS.

*Keyworth. On April 17th, at Birmingham, the wife of John White Keyworth, M.D., of a daughter.

*McPherson. On March 30th, at Bristol, the wife of D. G. McPherson, Esq., Surgeon, of Bristol, of a daughter.

*Squire. On April 17th, at 6, Orchard Street, Portman Square, the wife of William Squire, Esq., Surgeon, of a daughter.

Wakefield. On April 13th, at 11, Canonbury Place, Islington, the wife of Thomas Wakefield, Esq., Surgeon, of a son.

MARRIAGES.

Gowlland—Wilkinson. Gowlland, Peter, Esq., Surgeon, of Finsbury Square, to Rose Elizabeth, youngest daughter of John Wilkinson, Esq., of Kensington Park Terrace, at St. John's Church, Notting Hill, on February 16th.

Jenkings—Miller. Jenkings, Henry Gidoin, Esq., 10th Regiment Bengal Light Cavalry, to Lucy Jane, second daughter of George Miller, M.D., of Sidmouth, Devon, on April 14th.

Toulmin—Lenox. Toulmin, Frederick J., Esq., Surgeon, of Upper Clapton, to Eliza, youngest daughter of the late George Lenox, Esq., formerly of Liverpool, at St. Mary's Church, Reading, on April 16th.

DEATHS.

De Carro, the Chevalier Jean, M.D., at Carlsbad, Bohemia, aged 87, on March 12th. Dr. de Carro was the introducer of vaccination on the continent of Europe.

Drury. On April 13th, at Kilcarberry, county Dublin, aged two years and eight months, William Bruton, youngest child of W. V. Drury, M.D., of the Crescent, Camden Road.

*Lambert, William, Esq., Surgeon, of Sowerby, near Thirsk, Yorkshire, aged 71, on April 12th.

Sharpe. On April 14th, Henry, youngest son of John Sharpe, Esq., Surgeon, Waltham Cross, Herts.

*Smith, Thomas Wade, M.D., at Stroud, Gloucester, lately.

Smith, William Gray, M.D., of 59, Vauxhall Walk, aged 63, on April 2nd; and on the same day, at 10, Rochester Terrace, Vauxhall Bridge Road, Charles Doveton Smith, son of the above, student in medicine, aged 19.

*Workman, Thomas, Esq., of 10, Inverness Square, Bayswater, aged 64, on April 21st.

Yates, William, M.D., of Otsego County, New York, aged 90, on March 7th. Dr. Yates was a native of England; he studied at St. Bartholomew's, and there attended the first course of lectures delivered by Abernethy. He left this country at the age of 28; but, before his departure, made the personal acquaintance of Jenner, and received from him a large supply of vaccine virus, with directions for its use. On arriving at Philadelphia, he at once earnestly devoted himself to the introduction of the new doctrine, and was one of the first who conveyed the knowledge of it to America.

APPOINTMENTS.

Johnson, George, M.D., elected Professor of Materia Medica in King's College, in the room of J. F. Royle, M.D.

PASS LISTS.

Royal College of Surgeons. Members admitted at the meeting of the Court of Examiners on Friday, April 17th, 1857:—

Brayton, Jonathan, Whitehaven, Cumberland
Foster, William Frederick, Hambledon, Hants
Gardiner, Gideon George, Chalford, Gloucestershire
Gould, William, Denton, near Manchester
Hart, Adolphus Daniel, Brook Street, Hanover Square
Lawson, John Edward Spence, Egremont, Cumberland
Macauley, Thomas, Leicester
Maynard, John Clarkson Martin, Hudson's Bay Company
Newman, Augustus, Oxford
Prentis, Charles, Phillimore Place, Kensington
Thorinley, Joseph, Heaton Mersey, Lancashire
Towle, William Henry, Nuneaton, Warwickshire
Wilkinson, John, Hunmanby, Yorkshire

Monday, April 20th:—

Cooper, Astley, Plymouth, Devon
Gray, John Temperley, Hexham, Northumberland
Hooker, Edward Miles Coverdale, Sheerness
Humphreys, John, Royal Navy
Jones, John Edwards, Dolgelly, Merionethshire
Prall, Samuel, Rochester, Kent
Teevan, James, Killeshandra, co. Cavan

Apothecaries' Hall. Members admitted on Thursday, April 2nd, 1857:—

Clark, T. E., Cotham, near Bristol
James, M. P.
Tait, G. E., Heytesbury, Wilts

Thursday, April 9th:—

Cockcroft, George Edmundson, Middleham, Yorkshire
Edwards, Henry John, Bampton, Devon

Granger, William Slocombe, Bradford Abbotts, near Sherborne
James, Herbert, Merthyr Tydvil
Lewis, Robert Benson, Bradford, Yorkshire
Masters, John, jun., Ilminster
Robson, Frederick Abercrombie Hope, Peninsular and Oriental Company's Service
Skaife, Henry, Easingwold, Yorkshire
Thompson, William Wittman, Bognor, Sussex
Woodhouse, Thomas James

HEALTH OF LONDON:—WEEK ENDING APRIL 18TH, 1857.

[From the Registrar-General's Report.]

The total number of deaths registered in London in the week that ended on Saturday was 1084, showing a slight increase on the return of the previous week, which was 1059. In the ten years 1847-56, the average number of deaths in the weeks corresponding with last week was 1058; but as the number recorded last week occurred in an increased population, the average for the sake of comparison must be raised in proportion to the increase, in which case it will become 1164. Hence it appears that the state of the public health was so far favourable that eighty persons survived, who would have died if the average rate of mortality had ruled.

Hooping-cough seems to prevail as much, or continues to be fatal to as many children, as in the midst of winter, when the mean temperature was 12° or 18° lower than it is now. The deaths from this complaint last week rose again to 71, which occurred in proportions of considerable uniformity in most of the metropolitan districts. This increase may be due to the coldness of last week, when the thermometer fell on four nights to 33°, and on one to 31·4°. Seven registrars returned, each of them, 3 deaths from hooping-cough. The average number for corresponding weeks of previous years is 55; and the present return exhibits, therefore, an excess of 16. It is satisfactory to remark that only one death from small-pox occurred in the week; this single case was that of an infant, and took place in Rotherhithe. The numbers referred to measles and scarlatina, respectively 24 and 26, vary little from those of previous weeks. The former disease prevails chiefly in the Central districts; the latter, as well as fever and diarrhœa, chiefly in the Eastern. In the South sub-district of West London, out of 11 persons who are returned as having died since the 11th instant (inclusive) 7 are children who were carried off by hooping cough, scarlatina, measles, and typhus. Typhus (and common fever), which numbered 38 cases, continues to show less than the usual mortality. Fatal cases of phthisis or consumption were numerous; they amounted to 172, the corrected average being 155. Bronchitis has gradually fallen to 104 cases. Two men and two women had attained the age of 90 years or more. The oldest person who has a place in this week's report is a sugar refiner who died in Clerkenwell-close, at the age of 93 years.

Last week the births of 1,002 boys and 931 girls, in all 1,933 children, were registered in London. In the ten corresponding weeks of the years 1847-56, the average number was 1,567.

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·453 in. The readings ranged from 28·82 in. on Monday to 29·83 in. on Friday. The mean temperature of the week was 43·4°, which is 2·3° below the average of the same week in 43 years. On Monday the mean daily temperature was so low as 36·8° (or 8·4° below the average of the same day), and it was below the average on every day till Friday. On Saturday the mean temperature rose to 57·4°, which shows an excess of 11° above the average. On Wednesday the thermometer fell below freezing point, viz., to 31·4°, and on Saturday it rose to 68·5°, making an entire range of 37·1°. The mean dew-point temperature was 38·1°, and the difference between this and the mean temperature of the air was 5·3°. The wind was in the north-west on Monday and Tuesday; it was afterwards in the south-west and south-east. Rain to the amount of 0·38 in. fell in the week. There were heavy squalls of snow and rain on Monday night, and showers of rain or hail on several other days. Saturday was remarkably fine.

Medical Society of London. A paper will be read this (Saturday) evening, by J. M. Moullin, Esq., on "The Necrosis of Cancer and its Consequent Enucleation."

Dangers of the Profession in a Slave State. Mr. H., a planter in Louisiana, had a brother staying with him, who was born and educated in a northern state, a doctor by profession, and had come south in the hope of getting into practice. His experience so far had been most melancholy. He found the people were hardly ever ill enough to call for a doctor, and yet they were hardly ever well. Ailing was, in fact, their normal state. Sometimes he was sent for when somebody was just dying, and it was too late to do any good, and then he had to travel fifteen or twenty miles, often through swamp and forest, and would only receive two or three dollars by way of compensation. There was an old surgeon in the neighbourhood, a regular fire-eater, who had killed his man, not once or twice, but half-a-dozen times, and been so often in difficulties, that his hands and arms were crippled and contracted by the effects of shots and cuts, but not so as to prevent his performing a similar operation upon any one who attempted to cross his path with skill and success. This gentleman, he was told by everybody, would, as soon as he found he was come to set up in opposition to him, assuredly kill him. For the first month, therefore, he lived in daily fear of a catastrophe, and confessed that he avoided the old fellow as much as he could, without risking any imputation on his courage. The crisis came at last, however. A man came one night to secure his professional services for a child, supposed to be already *in articulo mortis*. He got up at once to go; but just as they were leaving the house, the father informed him that this child had been attended for nine months by the old gentleman, who had not, as yet, been formally dismissed. This information had such an effect upon our friend, that he positively declined to go, unless his rival's consent were first obtained to his being called in. The father at first consented to this, but turned back after he had been gone a few minutes, stating, that the child was his, and not old Dr. ——'s, and that he didn't care a darn if he was riled. This led to the junior complying. He prescribed, went home, loaded his revolver, and began to carry it constantly on his person. He met his antagonist a few days afterwards, and prepared for a regular shooting affair; but to his astonishment, received a pleasant salutation instead of a bullet, and rode along for some distance, chatting in a friendly manner. "The neighbours," he said, "were greatly astonished when they heard how the matter had ended." This may help to give some idea of the way in which the laws of professional etiquette are carried out, or expected to be carried out, in those parts. (*Correspondent of the Daily News.*)

Temperance Fanatics. At Albany the fanatics of temperance have resumed their labours. They some time since succeeded in passing a prohibitory law, which proved such a signal failure as almost to cover any attempt to legislate on the subject with ridicule. Its main provisions, when tested before the courts of law, were declared unconstitutional; the Act could not be enforced, and has been ever since a mockery. One thing it did effect; it destroyed the previously existing system of licenses; and, the prohibitory part of the law failing, the whole result was, that the traffic in liquor became free; exactly the reverse of the object the Abolitionists intended. The city lost a source of revenue, and there was less restraint on drinking than before. The party, too, lost so much influence from the ridicule excited by the amazing *fiasco*, that the speculating politicians, who are ready to join any party that seems to be gaining capital, abandoned it. It cannot attempt such another feat of legislation, but it dabbles with the question still, and would be content for the present to "regulate" the sale of liquors by some system of licenses resembling that which they destroyed. Individual members of the party occasionally propose schemes of reform which are of the nature of crotchets.

The Water of Paris. In a paper lately read before the Academy of Sciences at Paris, M. Boussingault has shown that the water contained in the wells of Paris is impregnated with nitrate of potash, or saltpetre. It is true that this water is not generally used for drink, but wine-dealers water their wines with it; and although nitrate of potash is not absolutely poisonous, since it may be taken with impunity in much larger doses than can be imbibed with the water, still its presence always denotes the existence of vegetable and animal matter in a state of decomposition, which is unquestionably injurious to the public health. In consequence of this discovery, the baking establishments of the hospitals of Paris have resolved to use Seine water for making bread, instead of the water brought from the wells of the neighbourhood.

Income of Hospitals and Dispensaries. In a report of the Statistical Society of London it is stated, that fourteen general hospitals in London, possess an income from realised property to the amount of £109,687; annual subscriptions, £17,091; donations, £16,636; legacies, £10,206; and their miscellaneous sources of income to £1,996. The total income of all these hospitals from every source is £155,616, and the annual contributions of the public amount to £45,929. In addition to the above hospitals, there are in this metropolis thirty-six special hospitals, possessing an aggregate income of £117,218; making the income of the general and special hospitals, taken together, amount to £272,834. There are also returns from forty-two general dispensaries, possessing incomes from all sources of £21,000; and eighteen special dispensaries, with annual incomes of £8,064. If these two sums, making £29,064, be added to the former, it gives the enormous amount of £301,898 annually expended in medical charities in this metropolis; and this sum, large as it is, excludes Samaritan and other funds connected with hospitals and dispensaries, Poor-Law medical relief (£28,776), cost of maintenance of pauper lunatics (£79,988), vaccination (£4,292), and nurses' training institutions. All these sums would make a grand total of nearly half a million expended on our sick poor.

London and Parisian Hospitals. From an interesting report of the Committee of Beneficent Institutions, it appears that London and Paris presents a striking contrast in the methods which they adopt for affording relief to the sick poor. In London, a great part of our medical relief is dispensed at the houses of the poor themselves by the physicians and surgeons attached to our dispensaries. In Paris, on the contrary, comparatively little relief is afforded otherwise than in the hospitals themselves. Thus, in the year 1853, the number of in-patients in hospitals in Paris amounted to no less than 91,754, against only 45,808 in hospitals in London, this calculation, in the case of London, being exclusive of patients treated in workhouse infirmaries. But, on the other hand, under the system of out-door medical relief recently set on foot in Paris, 102,472 persons received gratuitous attendance, against upwards of 600,000 patients similarly relieved in London. The nearest approach to a fair comparison between London and Paris, which it seems possible to make, is that afforded by a statement of the sums contributed by the medical charities and the poor rate, taken together, as follows:—In London, income of medical charities and poor relief, £1,150,000; in Paris, expenses of l'Administration Général, £560,853.

The Indian Materia Medica. The Government of India pays upwards of £40,000 a year for quinine alone. Notwithstanding this vast expenditure the supply might be tripled with advantage. Indents for quinine are jealously watched. At civil stations it is almost refused, and during an outbreak of fever it is always the first article to fall short, and the last to be sufficiently replaced. Of the cost of the remaining drugs we are not informed, but it can scarcely fall short of something like thirty lacs of rupees a year. These two figures are sufficient to prove the importance in an economical view of the substitution of native drugs. On the important benefits their introduction, or rather discovery, would confer upon the people, it is needless to enlarge. To the mass of the population English medicines are totally inaccessible. Almost alone among imported goods, drugs maintain the price they bore in the good old days before the Pagoda tree had been shaken into barrenness. Men in sickness do not ask the price of medicine. The vendors have every interest in maintaining it. Doctors have little interest in its reduction, and so the good old profitable rates are allowed quietly to endure. The natives do the best they can, sometimes reviving under drugs that would kill any other race of human beings, but usually dying of attacks which the Englishman regards as temporary ills. The evil and its remedy are both understood, and have been pointed out about once a week during the half of the past century. Yet we have done nothing towards obtaining the remedy we all know to exist. There is probably not a medicine imported from Europe, nor a costly drug from South America, which has not its counterpart in India. What have we done to discover them? Doctors living alone, without communication with their brethren, occasionally stumble on some valuable plant, some febrifuge, or substitute for catechu. They cure all around, satisfy themselves of the correctness of their views, and report to the medical board. The white ants eat the report with gusto, the doctor moves on disheartened to his next station, and there the matter ends. It is useless for the advocates of these effete institutions to talk of the valuable investigations they have suggested or proposed. How many English drugs have they displaced within this generation? It is a result, not a report that is required, and the only one obtained is an immense expenditure. At the present moment there is a committee sitting to ascertain what articles now imported from Europe can be obtained in India. How many drugs will that committee condemn? We will venture to predict not one, though every member of it has probably some vague idea that all the English medicines can be replaced. We need an officer specially appointed for this duty, with power to make researches throughout India, and to compel the services to aid him. Usually all information obtained will be willingly placed at his disposal. It is hopelessness rather than want of energy which leads so many surgeons to leave their information inaccurate or half-digested. No man with brains to devote himself to study will submit his work to a board selected for its age, and still less to a board which is regarded as a sepulchre of records. It is individual persistent energy, solely devoted to this one subject, which can alone accomplish any permanent improvement. A skilled chemist, communicating with all India, testing every drug, and bringing all experience into one focus, would do more in a year to ascertain the true qualities of the native pharmacopœia than the boards will accomplish in a century. Such an officer would be no very expensive addition to the staff of the medical service.—*Bombay Telegraph.*

The Case of Bacon and his Wife. It is understood that the two prisoners will be jointly tried for the murder of their children, and that in such case the statement of the wife that her husband committed the murder may be used as evidence against herself. It is expected that a joint defence will be made, and that this defence will be that the act of murder was committed by Mrs. Bacon while in an unsound state of mind, and that she is consequently not criminally responsible, and that the husband had nothing whatever to do with the crime. If this defence should be successful, and Bacon should be acquitted, he will then be removed to the country to take his trial at the summer assizes for the murder of his mother. It appears that since the committal of the prisoners they have both been in a very desponding way, particularly Bacon himself; and they are never left alone, six additional turnkeys being employed, three women and three men, to watch them, two during the night, and one during the day.

The Queen. As soon as ever Her Majesty is strong enough to travel, it is recommended by the medical gentlemen in attendance, that the Queen should make a short trip to the seaside, so as thoroughly to complete her recovery, and restore her health to its usual vigour in the shortest possible time. For this purpose it is expected, should everything go on as favourably as it has hitherto done, that Her Majesty may be enabled to leave town for her marine palace, Osborne, Isle of Wight, the latter end of the first week in May. (*Observer.*)

TO CORRESPONDENTS.

Dr. O'Connor has sent us a long letter in reply to Dr. Fuller. He appears to claim the merit of *the combination of sulphur with flannel.* This is scarcely a point of sufficient importance to justify our filling the pages of the Journal with a long controversy on the subject.

Communications have been received from:—Dr. G. Goddard Rogers; Mr. Holmes Coote; Dr. Cockle; Mr. Augustin Prichard; Mr. Kitching; Mr. T. Holmes; Dr. Garrod; Mr. H. Terry, Jun.; Mr. J. S. Bartrum; Mr. Crosby Leonard; Mr. Oliver Pemberton; Mr. Richard Griffin; Dr. W. O. Markham; Mr. James Long; Mr. L. Owen Fox; Dr. J. W. Keyworth; Dr. Logan; Dr. Wade; Dr. Nicholson; Mr. Marshall; Mr. Edward McDermot; Dr. Strrap; Dr. P. H. Williams; Mr. John A. Bolton; Dr. Oke; Dr. O'Connor; Mr. Faithfull; Dr. James Russell; and Mr. Griffin.

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February 1857. Actuary and Secretary.

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Advertisements ought to be delivered and paid for at the Office on the Thursday preceding publication; or if not paid for at the time should be accompanied by a respectable reference.

Post-Office Orders, "Bloomsbury Branch," are to be made payable to THOMAS JOHN HONEYMAN (the Publisher), 37, Great Queen Street, Lincoln's Inn Fields, London, W. C.

British Medical Association.

ADMISSION OF MEMBERS AND PAYMENT OF SUBSCRIPTIONS.

The General Secretary of the British Medical Association begs to call the attention of Associates to the Laws regarding the ADMISSION OF MEMBERS, and the PAYMENT of their SUBSCRIPTIONS.

Admission of Members. Any qualified Medical Practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any THREE Members, shall be admitted a Member at any time by the Committee of Council, or by the Council of any Branch."

"*Subscriptions.* The Subscription to the Association shall be One Guinea annually; and each Member, on paying his subscription, shall be entitled to receive the publications of the Association of the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary on or before the 25th of December previous."

Either of the following modes of payment may be adopted:—

1. Payment by Post-Office Order to the Treasurer (Sir C. Hastings, M.D., Worcester), or to the undersigned.
2. Payment to the Secretary of the Branch to which the Member belongs.
3. Members residing in the Metropolis and vicinity can make their payments through the Publisher of the BRITISH MEDICAL JOURNAL, Mr. Thomas John Honeyman, 37, Great Queen Street, Lincoln's Inn Fields, W. C.

PHILIP H. WILLIAMS, General Secretary.
Worcester, April 1856.

Crosse and Blackwell, Purveyors in

Ordinary to Her Majesty, respectfully invite attention to their PICKLES, Sauces, Tart Fruits, and other table delicacies, the whole of which are prepared with the most scrupulous attention to wholesomeness and purity. The practice of colouring pickles and tart fruits by artificial means has been discontinued, and the whole of their manufactures are so prepared that they are not allowed to come in contact with any deleterious ingredient. A few of the articles most highly recommended are, Pickles and Tart Fruits of every description, Royal Table Sauce, Essence of Shrimps, Soho Sauce, Essence of Anchovies, Jams, Jellies, Orange Marmalade, Anchovy and Bloater Pastes, Strasbourg and other Potted Meats, and Calf's-foot Jellies of various kinds for table use. C. and B. are also sole Agents for M. Soyer's Sauces, Relish, and Aromatic Mustard; and for Carstairs' Sir Robert Peel's Sauce, and Payne's Royal Osborne Sauce. The above may be obtained of most respectable Sauce Vendors throughout the United Kingdom; and Wholesale of

CROSSE and BLACKWELL, 21, Soho Square.

Guy's.—The Summer Session com-

mences on FRIDAY, the 1st of MAY. Gentlemen desirous of becoming Students must produce satisfactory testimony as to their education and conduct. They are required to pay £40 for the first year; £40 for the second year; and £10 for every succeeding year of attendance. One payment of £100 entitles a Student to a Perpetual Ticket. Clinical Clerks, Dressers, Ward Clerks, Dressers' Reporters, Obstetric Residents, and Dressers in the Eye Wards, are selected, according to merit, from those Students who have attended a second year. A Resident House Surgeon is appointed every six months from those Students who have obtained the College Diploma.

MR. STOCKER, Apothecary to Guy's Hospital, will enter Students, and give any further information required.

Guy's Hospital, April 14th, 1857.

St. George's Hospital and Medical

SCHOOL.—The Summer Session will commence on FRIDAY, the 1st of MAY.

LECTURES.

Materia Medica—Dr. Pitman.
Botany—Mr. Maxwell Masters.
Medical Jurisprudence—Dr. Fuller.
Midwifery—Dr. Robert Lee, F.R.S.
Practical Chemistry—Dr. Noad, F.R.S.

The Hospital contains 350 beds. One ward is devoted to the diseases peculiar to women; and Pupils have ample opportunities of attending Practical Midwifery. Clinical Lectures are delivered every week.

At the end of the Session Examinations will be held for Three Exhibitions, viz., one of £50, one of £40, and one of £20; the last two for Students in their first year.

Pupils of this Hospital may qualify themselves for the College of Surgeons and the Society of Apothecaries on the payment of Forty Guineas the first year, Forty Guineas the second year, and Twelve Guineas the third year.

Further information may be obtained from Mr. Pollock, the Treasurer of the School, or from Mr. Hammerton, the Apothecary of the Hospital.

The PRIZES will be awarded on FRIDAY, the 1st of MAY, at 3 o'clock. The Right Hon. LORD JOHN RUSSELL, M.P., will preside.

Bristol Medical School.—The

SUMMER SESSION will commence on FRIDAY, MAY 1st, when the Prizes obtained in the last Examinations will be distributed. The following Courses of Lectures will be delivered.

Midwifery	DR. SWAYNE.
Botany and Vegetable Physiology	MR. ETHERIDGE.
Forensic Medicine	MR. W. M. CLARKE.
Chemical Toxicology	MR. HERAPATH.
Materia Medica and Therapeutics	DR. BURDER.
Practical Chemistry	MR. HERAPATH.

Practical Instruction and Cases are provided for the Students of the Midwifery Class; the Students of the Botany Class attend the Lecturer upon Herborising Excursions.

JOSEPH GRIFFITHS SWAYNE, M.D.,
April 20th, 1857. Hon. Sec.

St. Bartholomew's Hospital.—Lec-

TURES for the SUMMER SESSION will commence on the 1st of MAY.

Materia Medica—DR. FARRE.
Forensic Medicine—DR. BLACK.
Midwifery—DR WEST.
Botany—DR. KIRKES.
Comparative Anatomy—MR. M'WHINNIE.
Practical Chemistry—DR. STENHOUSE.

Superintendence of Surgical Operations on the Dead Body by MR. HOLDEN and MR. SAVORY.

Clinical Lectures on Medicine by DR. BURROWS and DR. FARRE; and on Surgery by MR. LAWRENCE, MR. STANLEY, MR. LLOYD, and MR. SKEY.

Pathological Demonstrations—MR. CALLENDER.

Students can reside within the Hospital walls under the regulations of the College. Warden, DR. MARTIN.

Further information may be obtained from MR. PAGET, MR. HOLDEN, or any of the Medical Officers or Lecturers; or, on Inquiry, at the Museum or Library.

Mental Affections.—'Harts,' Wood-

ford.—Resident Physician, Dr. W. DANIEL. Consulting Surgeon J. STRUDWICKE BUNCE, Esq., M.D., M.R.C.S., etc.—Dr. WYTHE DANIEL many years the Senior Proprietor and Physician to Southall Park Asylum has taken the above residence, for the reception of a limited number of Mental Invalids of the higher classes. The mansion is spacious, and in every way adapted to carry out the non-restraint system, which is here practised to its fullest extent. The estate exceeds thirty acres, of which twelve are beautifully laid out in pleasure grounds and plantations, commanding extensive views of the surrounding country. "Harts" is nine miles by road from Regent's Park, and half a mile from the Woodford Station.—For terms, etc., apply to Dr. W. DANIEL.

Heigham Hall, Norwich.— Esta-

blishment for the Treatment of Patients of the Upper and Middle Classes, of both Sexes, labouring under Mental Derangement. Conducted by W. H. RANKING, M.D.; PETER NICHOLS, Esq., F.R.C.S.; and J. F. WATSON, Esq., M.R.C.S., Resident Proprietor.

This Establishment has recently been much enlarged and improved, and now comprises all the conveniences and luxuries of a well appointed mansion. The Patients are visited daily by Dr. RANKING or Mr. NICHOLS, and are under the constant surveillance of Mr. and Mrs. WATSON.

For Terms, etc., apply to Dr. RANKING, Norwich; or Mr. WATSON, Heigham Hall, Norwich.